Municipal Market Insight

November 2020

Portfolio Advisory Group – U.S. Fixed Income Strategies

What's inside

Click here for authors' contact information.

Investment and insurance products offered through RBC Wealth Management are not insured by the FDIC or any other federal government agency, are not deposits or other obligations of, or guaranteed by, a bank or any bank affiliate, and are subject to investment risks, including possible loss of the principal amount invested.

Economy continues rebounding

As expected by most economists, U.S. GDP grew 33.1% during the third quarter, reflecting an economy that continues showing signs of rebounding after a prolonged period of lockdowns that had caused the GDP to drop over 30% during the second quarter. Bloomberg News reported analysts believe economic growth will continue, fueled by strong consumer spending, strong housing demand, and businesses restocking depleted inventories. While the GDP news was very positive and expected, a possible second COVID-19 wave could negatively impact GDP growth in the fourth quarter.

With Joseph Biden projected to be the next president, a Fed meeting the first week of November, and October payroll released on Friday, Nov. 6, we expect uncertainty in the U.S. bond market to hold steady until a winner is determined in the election and a Fed decision comes out of the meeting. The expected blue wave failed to materialize leaving the Senate likely in Republican hands while Democrat hopes of picking up as many as 15 seats faded as Republicans picked up seats reducing the Democrat House majority. We believe a post-election stimulus package is more conceivable albeit on a much smaller scale than the previous $1.8 trillion being considered by the White House.

U.S. Treasury rate forecasts (% as of Oct. 9, 2020)

	2020			2021			
	Q2	Q3E	Q4E	Q1E	Q2E	Q3E	Q4E
FF	0.25	0.25	0.25	0.25	0.25	0.25	0.25
2-yr	0.16	0.13	0.20	0.20	0.20	0.25	0.25
5-yr	0.29	0.28	0.30	0.35	0.40	0.45	0.50
10-yr	0.66	0.69	0.75	0.80	0.85	0.95	1.00
30-yr	1.41	1.46	1.50	1.55	1.60	1.65	1.70

Source - RBC Economics

Treasuries vs. municipals (%)

	5-yr TSY	5-yr Muni	10-yr TSY	10-yr AAA Muni	30-yr TSY	30-yr AAA Muni
Beginning of month (10/1/20)	0.27%	0.26%	0.68%	0.87%	1.46%	1.62%
Mid-month (10/15/20)	0.31%	0.28%	0.73%	0.94%	1.51%	1.72%
End of month (10/30/20)	0.38%	0.30%	0.87%	0.93%	1.66%	1.71%

Source - Bloomberg (Treasuries), Thomson Reuters TM3 (Municipals)

RBC Wealth Management

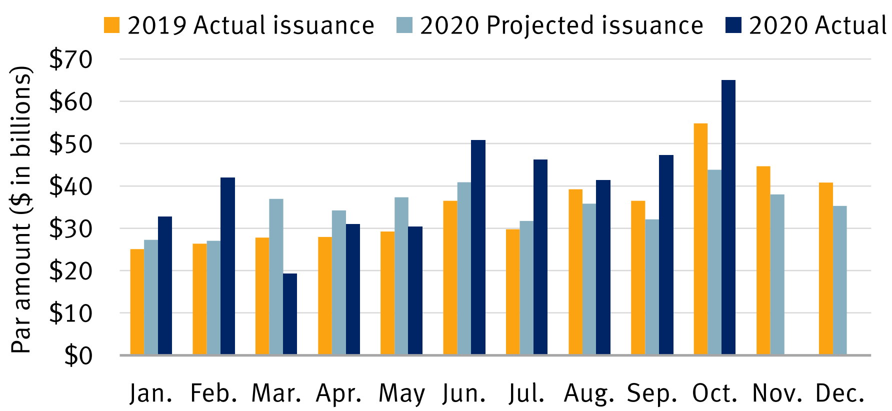
With October issuance topping $65 billion, year-to-date issuance has far exceeded our $380 billion projection.

Market investment strategy & market commentary

Market performance – Municipal yields rise amid an avalanche of issuance

October was challenging for the municipal market, which saw 5-, 10-, and 30-year benchmark municipal yields rise throughout the month. While municipals demand remained strong in October, borrowers flooded the market with $65.2 billion of new issues ahead of the presidential election and Fed meeting. With October issuance topping $65 billion, year-to-date issuance has far exceeded our $380 billion projection. With less than two months remaining in the calendar year and issuance topping $406 billion year to date, issuance is on pace to top $470 billion for the calendar year.

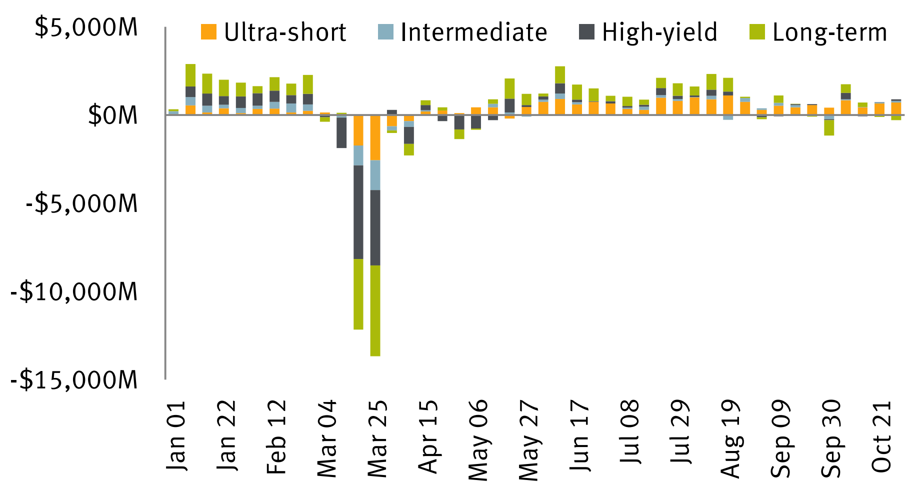
2020 issuance and redemption projections



Source - RBC Capital Markets, The Bond Buyer; data through 10/31/20

According to the Bloomberg Barclays Municipal Bond Index, municipals returned -0.30% in October, outperforming Treasuries' -0.94% but underperforming corporate bonds' -0.18%. Municipals' 3.02% year-to-date returns are lagging Treasuries and corporate bonds at 7.88% and 6.44%, respectively. Despite October's disappointing performance, investor demand remained strong for municipals throughout the month. Refinitiv Lipper U.S. Fund Flows reported investors added $3.5 billion to municipal mutual funds over the four-week October reporting period. Municipal mutual funds have recouped the $32 billion that had been withdrawn during the height of the COVID-19 pandemic with mutual funds reporting net inflows of $14.7 billion year to date.

2020 muni fund flows



Source - Refinitiv Lipper U.S. Fund Flows, RBC Wealth Management; weekly data though 10/28/20

We believe one reason direct bond ownership continues to dominate is because it preserves full control over the financial asset.

Looking ahead:

A Biden presidency could bode well for the municipal market under the guise of higher taxes and increased government spending on infrastructure and other big ticket items, all of which we expect will drive a rise in investor demand for the asset class. If President Trump is re-elected we would expect Congress to pass a post-election stimulus package to continue greasing the economic recovery ahead of a potential new wave of rising COVID-19 cases.

This month's focus: Direct bond ownership—enduring control during market disruptions

Direct municipal bond ownership continues to dominate total ownership despite an uptick in mutual fund participation. We believe one reason direct bond ownership continues to dominate is because it preserves full control over the financial asset. Individual bond investors determine what bonds to transact and when, which enables investors to avoid buying and selling at inopportune times. In comparison, mutual fund owners are forced to accept the financial consequences of potentially ill-timed investment decisions that are driven by net fund flows. Individual bond investors' ability to choose when and what to transact may permit more surgical investment and tax consequence decisions, which is particularly valuable during volatile market periods.

The basics

To get more granular, most mutual funds are compelled to invest almost all investor moneys into permitted investments to maximize returns. If money flows in, the mutual fund is prompted to purchase market-available bonds—even if the yield is sub-optimal or outright unattractive—since remaining in cash lowers the fund's reported performance. Conversely, if money flows out, the mutual fund is required to sell assets for whatever the market is willing to pay to meet redemptions, or draw upon external liquidity, if available.

Unfortunately, any forced selling is particularly harmful during market dislocations because bond prices often drop precipitously to attract sufficient buyers in a seller's market. Under these circumstances, price declines can be magnified for mutual funds because they typically must transact a large number of bonds in a short period to meet redemptions. Furthermore, all owners of the mutual fund—not just the investors exiting the fund—feel the effects of these forced sales because mutual funds pool all investors' money. In essence, all mutual fund owners are relinquishing control to the herd effect of the fund's net cash flows and must accept the financial outcomes and tax consequences of this effect.

Mutual funds unequivocally have many beneficial characteristics but these attributes may be overshadowed during volatile markets because of the potential forced selling due to net cash outflows. To illustrate, municipal bond mutual funds experienced an unprecedented aggregate $32 billion in net outflows during the height of the pandemic uncertainty in spring 2020. As a result, mutual funds that experienced cash outflows were likely forced to liquidate holdings into a massive seller's market to meet redemption requirements regardless if the fund was otherwise well-positioned. As a consequence, both the investors exiting the fund and the remaining investors likely realized net asset value (NAV) declines and tax consequences due to the extraordinary negative fund flows.

Market dislocations

Mutual funds are also a less efficient way to capitalize on mispriced securities during a market dislocation. When buying a mutual fund, investors cannot target only attractively-priced securities, but instead have to buy a proportional stake of the mutual fund's entire existing portfolio. In reality, even when investors contribute new capital to their mutual fund positions during a market dislocation, the money is unlikely to be used to purchase attractively-priced securities. Instead, if the fund is experiencing net outflows, these

> Mutual funds have many beneficial characteristics; however, all mutual fund owners are beholden to the herd effect of fund flows, which may cause undesirable investment and tax consequences.

investors only receive a proportional share of the existing portfolio. Of course, mutual fund investors that add to their positions during dislocations are dollar-cost averaging, and thus ultimately benefit if the fund's NAV rebounds.

In contrast, individual bond owners always have full discretion to hold or sell their positions, and if investors held during the most recent market dislocation, they did not experience any tax consequences or realize any actual losses. Furthermore, individual bond investors can also specifically target mispriced bonds by purchasing securities at depressed prices in a seller's market.

Mutual funds have many beneficial characteristics; however, all mutual fund owners are beholden to the herd effect of fund flows, which may cause undesirable investment and tax consequences. These undesirable consequences may be especially pronounced during extreme market volatility. Direct bond owners, on the other hand, retain full control over their financial asset, which enables them to avoid transacting at inopportune times. Individual bond investors' ability to choose when and what to transact may permit more surgical investment and tax consequence decisions, which is particularly valuable during volatile market periods.

Municipal news

General commentary

Muni measures on 2020 ballots

Voters were asked to vote on $45 billion of ballot measures on Election Day seeking funding for hospital projects and improving schools. The borrowing is well behind the more than $60 billion on the ballot in 2016 and the lowest since 2012. We expect state and local government finances will remain under pressure with the possibility of new state-mandated lockdowns looming. Another round of lockdowns could negatively impact already-fragile state finances and heighten the possibility of credit downgrades if a new round of shutdowns is implemented.

State coffers see significant decline

State tax collections from March through August dropped 6% or around $31 billion compared to the same period the last year, as the pandemic and a recent rise in cases negatively impact state coffers. On a positive note, the revenue drop is trending less than originally expected according to the Urban Institute.

Municipal market news

California

Facing more damaging fires and power outages

The state, which has seen over 4.1 million acres burn this year, is bracing for severe storms coming from the Pacific into Oregon and Washington pushing wind gusts to over 70 miles per hour in canyons and on ridges, potentially sparking new fires in the San Francisco Bay area including the Sierra Nevada foothills, the Central Valley, and Central Coast. The fire risks may cause PG&E to once again force rolling blackouts to residents of the impacted areas. The power shutoffs, if they occur, would impact the largest number of residents to date this year.

State coffers get a boost

The state collected $54.1 billion for the first three months of the fiscal year that began July 1. The tax haul is $8.7 billion more than budget projections. The state collected $14 billion in revenue in September alone, $4.2 billion more in tax receipts than projected, a sign the state's economy remains on the mend.

In an effort to help offset the impact of COVID-19, Louisiana lawmakers would like to create a sales tax holiday.

Chicago – Tough budget season

Chief Financial Officer Jennie Huang Bennett said she remains uncertain whether the city can avoid a rating downgrade during the current budget season, as the city seeks to achieve structural balance and move away from one-time revenue measures. Chicago's $12.8 billion budget raises taxes and cuts jobs. A city alderman asked the CFO why the city is not opting for a scoop-and-toss approach to achieve savings rather than raise property taxes as called for in the city's budget. The CFO said the city could still opt for a scoop-and-toss approach as well. The alderman said by increasing borrowing and refinancing the city could save as much as $100 million.

Connecticut – Budget deficit improves

The state's budget chief said Connecticut's budget gap shrank to $1.3 billion, reflecting a $454 million upward revision in tax revenue. The budget gap adjustment is 40% lower than the previous month's projections as the state saw a substantial boost in September tax revenue.

Harvard University, MA – Posts operating losses

The university reported that for the second straight year it would post operating losses, marking the first time since the 1930s the university has experienced two consecutive years of losses. The university posted a $10 million loss in FY2020 and is expecting another loss in FY2021 as costs associated with the pandemic including COVID-19 testing, tracing, and classroom and dormitory reconfiguration have all driven university costs up, negatively impacting the university's bottom line.

Henry Ford Village, MI – Senior-care sector remains under pressure

The not-for-profit continuing care retirement community, with almost $50 million of tax-exempt debt outstanding, filed for bankruptcy protection in late October. In July, the retirement community reported it had 64 residents that tested positive for COVID-19 of which 26 patients had passed away. The project's woes began in early May when it was forced to tap reserves to make its semi-annual debt service payment.

Louisiana – Lawmakers approve sales tax holiday

In an effort to help offset the impact of COVID-19, state lawmakers would like to create a sales tax holiday that would save taxpayers around $4.5 million during the pre-Thanksgiving two-week sales tax holiday period if the governor signs off on the proposal. Purchases up to $2,500 would be exempt from sales and use taxes.

New York

Income tax and other revenue surprise to the upside

State Comptroller Thomas DiNapoli said state tax revenues for the first six months of the fiscal year exceeded projections by $1.15 billion. The state collected $39.6 billion from April through September compared to original estimates the state would collect $38.4 billion. The state has recently experienced a rise of COVID-19 cases and may be forced to impose state-mandated closures if cases continue surging, which could negatively impact tax collections through the second half of the state fiscal year that ends March 31.

Sales taxes improve quarter over quarter but still lag

Third-quarter statewide sales tax collections dropped 9.5% or $452 million less than the same period last year. The drop was felt most in New York City where sales tax collections dropped 22% during the quarter. However, the 9.5% drop is a significant improvement from the second quarter's 27.1% decline at the height of the COVID-19 pandemic. With cases spiking again, the state may face another round of closures.

The National Investment Center for Seniors Housing and Care reported that residency levels at assisted and independent living units fell to a record low of 82% in the third quarter.

New York Metropolitan Transportation Authority (MTA)
The financially strapped MTA submitted a notice of intent to borrow from the Fed's Municipal Liquidity Facility. The authority is planning to borrow a remaining $2.9 billion, which the MTA will pledge payroll mobility tax revenues as security for the borrowing. We expect the MTA's near-term outlook to remain tenuous as it struggles to regain ridership amid another potential surge in COVID-19 cases.

MTA – Absent federal aid, region's economy at risk
Pat Foye, head of the MTA, said absent $12 billion in federal assistance, the New York City region could be at risk of losing $65 billion in GDP annually. Foye said without the assistance, the nation's largest transportation system would be forced to drastically cut services and lay off employees, a move Foye said could cost the city's economy up to 450,000 jobs by 2020 and potential earning losses of $50 billion annually, including the GDP impact.

Senior housing sector remains under pressure

The National Investment Center for Seniors Housing and Care reported that residency levels at assisted and independent living units fell to a record low of 82% in the third quarter, a 2.6% quarter-over-quarter (q/q) decline and follows a prior 2.8% q/q decline. The senior living sector is among the hardest-hit sectors impacted by the pandemic, and we expect the sector to remain under financial pressure until a vaccine or other COVID-19 treatments are perfected to protect the highly vulnerable senior population.

Student housing sector, like senior care, remains under pressure

The $14 billion student housing sector will continue facing significant headwinds, in our opinion, with many student housing complexes remaining empty amid the pandemic and virtual learning. We expect continuing enrollment declines and rising costs associated with COVID-19 to continue negatively pressuring the sector and its ability to meet debt service payments during the near term. According to Municipal Markets Analytics, nine student housing projects have become impaired so far in 2020, the most since 2009, shortly after the Great Recession.

Ratings corner

Notable state and local issuer rating updates

California – Affirmed by Fitch
On Oct. 12, Fitch Ratings affirmed the state's AA rating, the outlook remains stable. The rating affirmation "incorporates the state's large and diverse economy, which supports strong, albeit cyclical revenue growth prospects, a solid ability to manage expenses through the economic cycle and moderate level of long-term liabilities."

Cherry Hill, NJ – Upgraded to Aaa
On Oct. 13, Moody's upgraded the New Jersey suburb of Philadelphia to Aaa from Aa1. The rating of the township, headquarters of TD Bank N.A., was raised due to its large tax base, above-average wealth and income, and consistent surpluses. The upgrade affects approximately $106 million of outstanding debt.

Chicago and Chicago Sales Tax Securitization Corp. – Fitch affirms rating
On Oct. 28, Fitch Ratings affirmed the Chicago's BBB- rating and the AA- rating of the Chicago Sales Tax Securitization Corp., the outlook on both issues was revised to negative from stable. Fitch recognized the windy city's important role as an economic hub for the Midwest, which should support solid revenue growth post-pandemic. The rating also considers the city's unlimited taxing power providing interim budget flexibility. The negative outlook reflects the credit pressure associated with significant budget gaps totaling just under $2 billion over the next two fiscal years.

On Oct. 28, Fitch Ratings downgraded the MTA's rating two notches to A- from A+ with the outlook on the country's largest transit system remaining negative.

Moody's revises the Windy City's outlook

On Oct. 29, Moody's revised Chicago's outlook to negative from stable. The outlook revision "reflects the expectation that the sudden and substantial decline in certain economically sensitive revenue will intensify the city's challenge to reduce the persistent structural gap between revenue and expenses." At the same time, Moody's affirmed the city's Ba1 rating.

Hawaii – Downgraded by Fitch

On Oct. 19, Fitch Ratings downgraded the state's rating to AA from AA+ and revised the outlook to stable from negative. The rating downgrade reflects the impact the COVID-19 has had on the state's economy and workforce, with a particular emphasis on the state's very large leisure and hospitality sector. An economic rebound in the state will remain contingent on how quickly health and economic conditions improve from countries where visitors to the island originate.

New York Metropolitan Transportation Authority (MTA) – Another downgrade

On Oct. 28, Fitch Ratings downgraded the MTA's rating two notches to A- from A+ with the outlook on the country's largest transit system remaining negative. The downgrade was primarily driven by the numerous downside risks the authority is facing, including weak ridership and declining revenue, which is projected by MTA to drive budget gaps of $3.2 billion, $5.8 billion, and $3.5 billion in FY2020, FY2021, and FY2022, respectively. The budget gaps could force the MTA to deficit borrow, which Fitch said could eventually impact the Authority's access to the capital markets.

State/territory credit ratings

State/Territory	Fitch	Moody's	Kroll
Alabama	AA+	Aa1	-----
Alaska	A+	Aa3	-----
Arizona	-----	Aa2	-----
Arkansas	-----	Aa1	-----
California	AA	Aa2	-----
Colorado	-----	Aa1	-----
Connecticut	A+	A1	AA-
Delaware	AAA	Aaa	AAA
Florida	AAA	Aaa	-----
Georgia	AAA	Aaa	-----
Hawaii	**AA**	Aa2	-----
Idaho	AA+	Aa1	-----
Illinois	BBB-	Baa3	-----
Indiana	AAA	Aaa	-----
Iowa	AAA	Aaa	-----
Kansas	-----	Aa2	-----
Kentucky	AA-	Aa3	-----
Louisiana	AA-	Aa3	-----
Maine	AA	Aa2	-----
Maryland	AAA	Aaa	-----
Massachusetts	AA+	Aa1	-----
Michigan	AA	Aa1	-----
Minnesota	AAA	Aa1	-----
Mississippi	AA	Aa2	-----
Missouri	AAA	Aaa	-----
Montana	AA+	Aa1	-----
Nebraska	-----	Aa1	-----

State/Territory	Fitch	Moody's	Kroll
Nevada	AA+	Aa1	-----
New Hampshire	AA+	Aa1	-----
New Jersey	A-	A3	A
New Mexico	-----	Aa2	-----
New York	AA+	**Aa2**	AA+
North Carolina	AAA	Aaa	-----
North Dakota	-----	Aa1	-----
Ohio	AA+	Aa1	-----
Oklahoma	----	Aa2	-----
Oregon	AA+	Aa1	-----
Pennsylvania	AA-	Aa3	-----
Rhode Island	AA	Aa2	-----
South Carolina	AAA	Aaa	-----
South Dakota	AAA	Aaa	-----
Tennessee	AAA	Aaa	-----
Texas	AAA	Aaa	-----
Utah	AAA	Aaa	-----
Vermont	AA+	Aa1	-----
Virginia	AAA	Aaa	-----
Washington	AA+	Aaa	-----
West Virginia	AA	Aa2	-----
Wisconsin	AA+	Aa1	AA+
Wyoming	-----	-----	-----
District of Columb	AA+	Aaa	-----
Guam	-----	-----	-----
Puerto Rico	D	Ca	-----
Virgin Islands	-----	-----	-----

On Oct. 1, Moody's downgraded New York's rating one notch to Aa2 from Aa1 as COVID-19 takes its toll on the state's finances. On Oct. 19, Fitch Ratings downgraded Hawaii to AA from AA+, the state's outlook was revised to stable from negative.
Source - Fitch Ratings, Moody's Investors Service, Kroll Bond Ratings Agency

Judge Laura Taylor Swain, charged with overseeing the island nation's restructuring, said the board should submit a new debt-cutting proposal.

Rhode Island – Rating affirmed

On Oct. 28, Fitch Ratings affirmed the state's AA. The rating affirmation reflects the state's "conservative and prudent fiscal management and moderate long-term position, offset by below-average long-term economic growth for a U.S. state."

University Student Housing – West Chester University (PA)

On Oct. 29, Moody's downgraded the student housing projects to Ba2 from Baa3 maintaining a negative outlook. The downgrade reflects the college's decision to continue the semester with primarily online instruction at least into the spring. Moody's expects an almost 74% drawdown of reserves to meet the next debt service payment.

Territorial update

Commonwealth of Puerto Rico

Bankruptcy judge gives fiscal oversight board time

Judge Laura Taylor Swain, charged with overseeing the island nation's restructuring, said the board should submit a new debt-cutting proposal with details on how to implement the plan by February. Holders of the island's $10.7 billion of outstanding debt were asking the court to require the board to file a reorganization plan by Nov. 30, to which the judge said the demand was "both inappropriate and draconian given the oversight board's stated intention to engage in further negotiations."

Bankruptcy judge rejects request for an investigation

National Public Finance Guarantee Corp.'s (NPFG) request for an investigation into whether hedge funds traded Puerto Rico bonds while holding non-public information and profiting from those trades was rejected by Swain, who said securities regulators were better-suited to investigate the bond insurer's claims.

Puerto Rico Sales Tax Restructuring Corp. (COFINA) payments allocated

The Commonwealth has set aside $454 million in sales tax revenue to cover COFINA principal and interest payments through June 30, 2021. The Commonwealth successfully restructured and reduced its COFINA debt by $5.5 billion and issued $12 billion in new securities backed by Commonwealth sales tax receipts. Since the restructuring, COFINA payments have been sufficient and on time to meet COFINA debt service payments.

Oversight Board – Seeks to cut pension plan

The Oversight Board is seeking to halt implementation of three retirement laws said to go in effect soon. The new laws would allow the commonwealth to offer public employees a chance to retire early, saying it could save the island $8.3 billion over the next 30 years. The Oversight Board said the new laws were not properly evaluated and should not become law. The Board is contesting the savings figure and is arguing enactment of the laws would force the commonwealth to layoff an additional 1,500 employees on top of the 3,215 employees the commonwealth agreed to layoff. The move by the Board sets up a battle in which the Board said it would take the steps necessary to block implementation.

Puerto Rico votes on statehood again

Voters approved the non-binding referendum for statehood 52% to 48%. That is in line with 2012 and 2017 results when voters approved a move toward statehood. Pedro Pierluisi, an advocate for statehood, won the governor's race. However, the chances of statehood for Puerto Rico (and Washington, D.C.) remain uncertain in the wake of the likelihood Republicans retained control of the Senate and Democrats unexpectedly lost seats in the House of Representatives.

Revenues exceed estimates

The commonwealth collected $1.67 billion during July and August, the first two months of the fiscal year. The $1.67 billion is $190 million more than projected. While an improvement and ahead of budget projections, tax collections are still $149 million below commonwealth collections the same period the prior year, as the pandemic takes its toll on the island's economy.

RBC Wealth Management retail trading (10/1/20 – 10/30/20)

Top 10 CUSIPs selling volume to retail customers

CUSIP	Description	Maturity	Coupon	Volume
735000QU8	PORT OAKLAND-P-AMT	05/01/2029	5.00	5,338
38611TCC9	GRAND PKWY TRANSPRTN	10/01/1949	4.00	4,805
88283KAZ1	TEXAS TRANSPRTN-C-REF	08/15/1942	5.00	4,026
64971XQM3	NYC TRANSITIONAL FIN	05/01/1945	4.00	3,371
592250DQ4	MET PIER-AGM	06/15/1950	4.00	3,241
235036QT0	DALLAS ARPT-JT IMPT-A	11/01/1938	5.25	3,001
64990FYR9	DASNY -A -REF -GROUP	03/15/1948	4.00	2,610
13063DVZ8	CALIFORNIA ST	11/01/1945	4.00	2,331
196632Y31	COLORADO SPRINGS UTIL	11/15/1950	5.00	2,256
13063DWB0	CALIFORNIA ST	11/01/1950	4.00	2,244

Top 10 CUSIPs buying volume from retail customers

CUSIP	Description	Maturity	Coupon	Volume
79766DGG8	SAN FRANCISCO-C	05/01/1946	5.00	5,620
34061UAG3	FL DEV FIN-A-CHRT SCH	06/15/2026	7.00	4,809
792905DH1	ST PAUL HSG-A-REF	07/01/1933	5.00	3,514
70917SNU3	PA HGR ED FACS AUTH-A	09/01/1945	5.00	2,785
958697KC7	WSTRN MN MUNI PWR AGY	01/01/1934	5.00	2,281
709224V71	PA TURNPIKE COMM	12/01/1943	3.58	1,924
155498CX4	CENTRL TX REGL-SUB	01/01/1942	5.00	1,819
79765RW47	SAN FRANCISCO CITY &	11/01/1945	5.00	1,778
7962532R2	SAN ANTONIO ELEC/GAS	02/01/1948	5.00	1,397
70917SNP4	PA HGR ED FACS AUTH-A	09/01/1950	5.25	1,287

Source - RBC Wealth Management

RBC Capital Markets institutional trading (10/1/20 – 10/30/20)

Top 10 CUSIPs selling volume to institutional customers

CUSIP	Description	Maturity	Coupon	Volume
626207X25	GA MUNI ELEC AUTH -A	01/01/1949	5.00	36,781
79625GDG5	SAN ANTONIO TX-TXBL	02/01/1948	2.91	27,999
487694NE7	KELLER SD	08/15/1938	4.00	24,234
6775212C9	OHIO ST-B	06/15/1933	4.50	23,164
199820S69	COMAL ISD-B	02/01/1939	4.00	22,601
6775212B1	OHIO ST-B	06/15/1932	4.38	22,053
22170QAA8	COTTAGE HEALTH SYSTEM	11/01/1949	3.30	15,054
48305QAD5	KAISER FOUND HOSPIT	05/01/1947	4.15	13,916
564386SB7	MANSFIELD ISD	02/15/1932	1.80	13,405
720424C73	TACOMA SCH DT#10	12/01/1940	4.00	13,333

Top 10 CUSIPs buying volume from institutional customers

CUSIP	Description	Maturity	Coupon	Volume
626207X25	GA MUNI ELEC AUTH -A	01/01/1949	5.00	36,742
79625GDG5	SAN ANTONIO TX-TXBL	02/01/1948	2.91	28,923
487694NE7	KELLER SD	08/15/1938	4.00	24,212
6775212C9	OHIO ST-B	06/15/1933	4.50	23,144
199820S69	COMAL ISD-B	02/01/1939	4.00	22,573
6775212B1	OHIO ST-B	06/15/1932	4.38	22,051
88256CAW9	TX GAS ACQ VAR-SR-B	12/15/2026	0.87	17,622
564386SB7	MANSFIELD ISD	02/15/1932	1.80	13,389
720424C73	TACOMA SCH DT#10	12/01/1940	4.00	13,321
64966QPW4	NEW YORK CITY -C	08/01/1934	5.00	12,609

Source - RBC Capital Markets

Bond Buyer indexes

Weekly	Current 10/29/20	Previous 10/22/20	2020 high	Date	2020 low	Date
Bond Buyer Revenue Bond Index	2.76%	2.79%	3.34%	(4/02)	2.44%	(8/06)
Bond Buyer 20-Bond Index	2.34%	2.37%	2.84%	(4/02)	2.02%	(8/06)
Bond Buyer 11-Bond Index	1.87%	1.90%	2.37%	(4/02)	1.55%	(8/06)

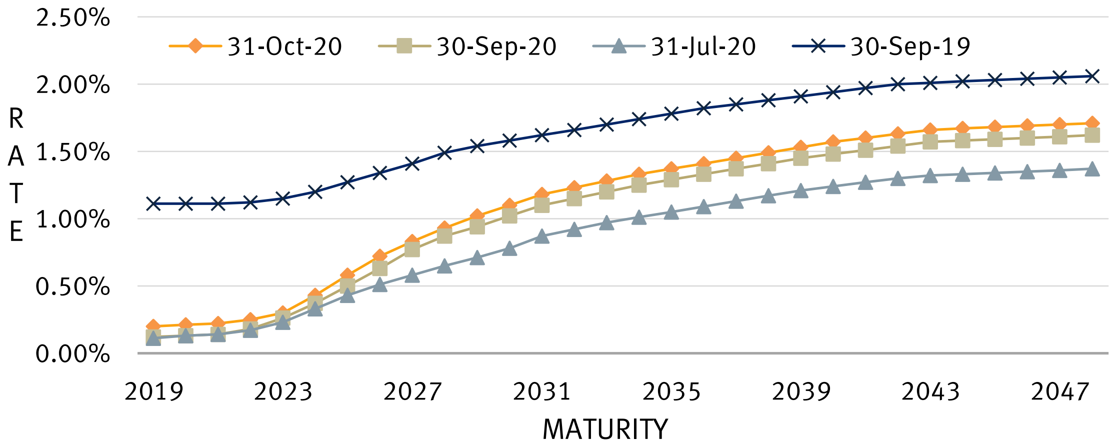
Source - The Bond Buyer

Barclays Municipal Index returns

	Index								
	1-month	5-year (4–6)	10-year (8–12)	15-year (12–17)	Long bond (22+)	AAA	AA	A	BAA
Month-to-date total return	-0.30%	-0.20%	-0.31%	-0.35%	-0.43%	-0.38%	-0.33%	-0.19%	-0.24%
Year-to-date total return	3.02%	3.28%	3.45%	3.38%	2.70%	3.84%	3.37%	2.63%	0.75%

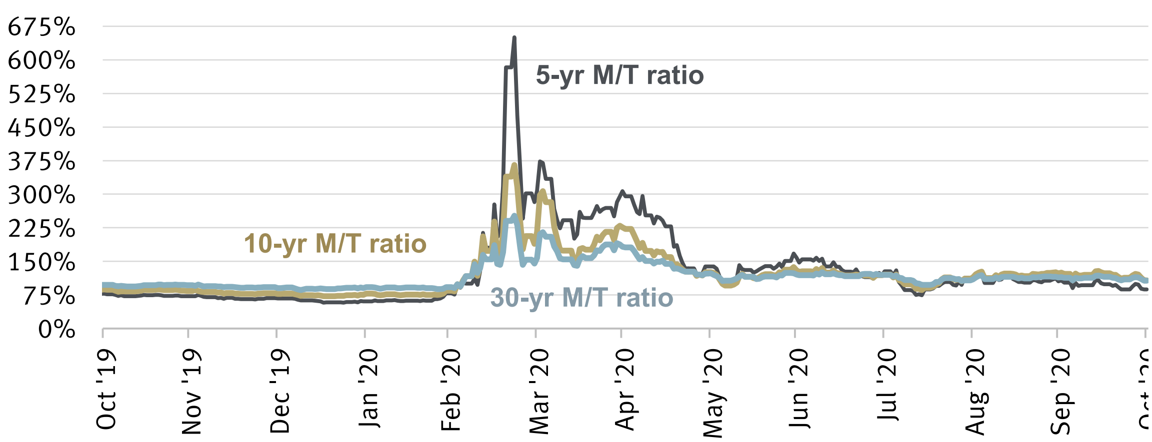
Source - Barclays; data through 10/31/20

Muni market data AAA yield curve



Source - RBC Wealth Management, Thomson Reuters TM3; data through 10/31/20

Muni/Treasury ratio comparison



Source - RBC Wealth Management, Bloomberg; data through 10/31/20

Municipal bond insurers

Insurer	Moody's	Kroll Ratings
ACA	Not rated	Not rated
AMBAC	Not rated	Not rated
Assured Guaranty (AGC)	A3 (stable outlook)	AA (stable outlook)
Assured Guaranty Municipal Corp. (AGM)	A2 (stable outlook)	AA+ (stable outlook)
Berkshire Hathaway (BHAC)	Aa1 (stable outlook)	Not rated
Build America Mutual (BAM)	Not rated	Not rated
FGIC	Not rated	Not rated
Municipal Assurance Corporation	Not rated	AA+ (stable outlook)
National Public Finance (MBIA)	Baa2 (stable outlook)	Not rated
Syncora	Not rated	Not rated

Source - RBC Wealth Management; data through 10/31/20

Authors

Remo Di Re, Senior Municipal Credit Strategist
remo.dire@rbc.com; RBC Capital Markets, LLC

James Mann, Head, U.S. Fixed Income Strategies
james.mann@rbc.com; RBC Capital Markets, LLC

Third-party disclaimer

References herein to "LIBOR", "LIBO Rate", "L" or other LIBOR abbreviations means the London interbank offered rate as administered by ICE Benchmark Administration (or any other person that takes over the administration of such rate).

Disclaimer

The information contained in this report has been compiled by RBC Wealth Management from sources believed to be reliable, but no representation or warranty, express or implied, is made by Royal Bank of Canada, RBC Wealth Management, its affiliates or any other person as to its accuracy, completeness or correctness. The material contained herein is not a product of any research department of RBC Capital Markets, LLC or any of its affiliates. Nothing herein constitutes a recommendation of any security or regarding any issuer; nor is it intended to provide information sufficient to make an investment decision. All opinions and estimates contained in this report constitute RBC Wealth Management's judgment as of the date of this report, are subject to change without notice and are provided in good faith but without legal responsibility. This report is not an offer to sell or a solicitation of an offer to buy any securities. Past performance is not a guide to future performance, future returns are not guaranteed, and a loss of original capital may occur. Every province in Canada, state in the U.S., and most countries throughout the world have their own laws regulating the types of securities and other investment products which may be offered to their residents, as well as the process for doing so. As a result, the securities discussed in this report may not be eligible for sale in some jurisdictions. This report is not, and under no circumstances should be construed as, a solicitation to act as securities broker or dealer in any jurisdiction by any person or company that is not legally permitted to carry on the business of a securities broker or dealer in that jurisdiction. Nothing in this report constitutes legal, accounting or tax advice or individually tailored investment advice. This material is prepared for general circulation to clients and has been prepared without regard to the individual financial circumstances and objectives of persons who receive it. Diversification does not assure a profit or protect against loss. Bond investors should carefully consider risks such as interest rate, credit, repurchase and reverse repurchase transaction risks. Non-investment grade rated bonds (a.k.a. high yield bonds) tend to be subject to larger price fluctuations than investment grade rated bonds and payment of interest and principal is not assured. Investing in municipal bonds involves risks, such as interest rate risk, credit risk and market risk, including the possible loss of principal. Clients should contact their tax advisor regarding the suitability of tax-exempt investments in their portfolio. If sold prior to maturity, municipal securities are subject to gain/losses based on the level of interest rates, market conditions and the credit quality of the issuer. Income may be subject to the alternative minimum tax (AMT) and/or state and local taxes, based on state of residence. Income from municipal bonds could be declared taxable because of unfavorable changes in tax laws, adverse interpretations by the Internal Revenue Service or state tax authorities, or noncompliant conduct of a bond issuer. The investments or services contained in this report may not be suitable for you and it is recommended that you consult your financial advisor if you are in doubt about the suitability of such investments or services. To the full extent permitted by law neither RBC Wealth Management nor any of its affiliates, nor any other person, accepts any liability whatsoever for any direct, indirect or consequential loss arising from, or in connection with, any use of this report or the information contained herein. No matter contained in this document may be reproduced or copied by any means without the prior written consent of RBC Wealth Management in each instance. RBC Wealth Management is a division of RBC Capital Markets, LLC, member NYSE/FINRA/SIPC, which is an indirect wholly-owned subsidiary of the Royal Bank of Canada and, as such, is a related issuer of Royal Bank of Canada and part of the RBC Financial Group. Additional information is available upon request.