Equitable Facilities Fund

A nonprofit, social impact fund

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Charter School Bond Sector: 2019 Year in Review

All-time Record Volume Issued

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Under normal circumstances, this report would have been released much earlier in the year. Like so many other market sector participants, however, Equitable Facilities Fund, Inc.'s ("EFF") focus has been directed to 2020 efforts, including the unprecedented effects COVID-19 has had on schools, their staff, and families. EFF hopes that while produced later than usual, the data contained in the article will still prove informative and useful as a record for 2019 charter school bond activity.

2019 Summary:

- Annual charter school bond volume produced an all-time record of more than $3.7 billion—a 25% increase over 2018's activity; the number of transactions (153) was also up—by 17.6%--although 2017's deal count of 159 still holds the annual record;
- Largest deal was $214,165,000 for IDEA Public Schools of Texas—the country's largest charter network and Standard & Poor's ("S&P") first "A-" rated charter borrower;
- Texas schools continued to out borrow all other states with almost $900 million issued, representing 23.8% of all 2019 volume;
- Charters in 25 jurisdictions came to market in 2019, including four not on the list in 2018 (Delaware, District of Columbia, Georgia, and Rhode Island);
- Top five states (Arizona, California, Colorado, Florida, and Texas) accounted for 53.9% based on transaction count and 62.9% based on volume;
- Based on transaction count, 66% were sold without ratings and 53% based on volume;
- 80% of transactions were issued exclusively for new money purposes;
- Charters relied on 22 distinct investment banks to place their bonds, however 74% of deals were executed by five highly experienced banking firms. i.e., BB&T (now Truist Capital), D.A. Davidson, Baird, Piper Jaffray (now Piper Sandler), and Ziegler;
- Half of all borrower used a registered Municipal Advisor (MA) to assist in bond offering; metric was higher at 58% when based on dollar amount issued; and
- Default rate remained steady at 5% based on number of transactions but declined to 2.7% based on original par amount.

Sector Trends as 2020 Changes the Landscape

The timing of this report allows for the identification of the historic influence of the 2020 pandemic on the charter bond market. These trends reflect some of the activity in 2019 and begin to report on the activity in 2020 Charter school bond issuance trends recently observed and expected to continue, particularly in 2020 and beyond, include:

General Charter School Sector:

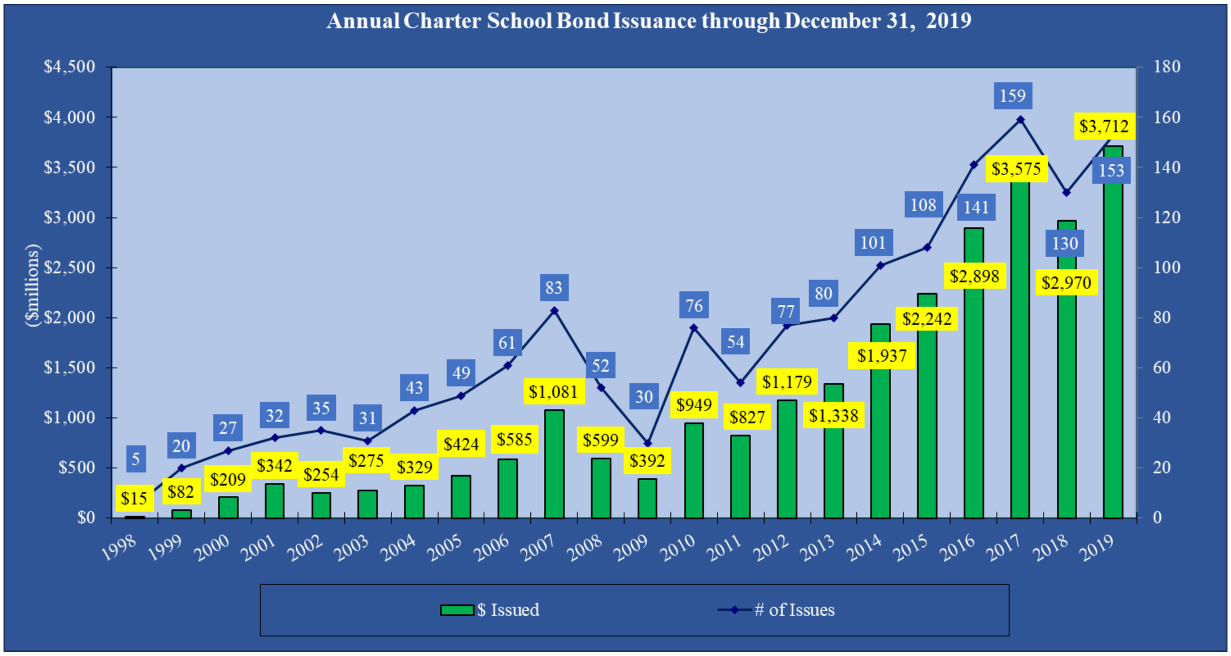
- *Flat, reduced, or deferred per pupil revenue in certain states due to COVID-19 effects on state and local revenues;*
- *Greater reliance by schools (district and charter) on cash-flow borrowing, particularly if liquidity is affected by reduction or deferment of per pupil revenue;*
- *Stronger political headwinds regarding funding and the slowing of charter school growth;*
- *Increased push for unionization of teachers and other staff; and*
- *Strengthening authorizer quality and standards which is likely to result in higher bars for approving new schools and renewing existing schools.*

Charter School Bond Sector:

- *Annual sector issuance between $3 billion and $4 billion;*
- *Increased presence of repeat large borrowers accessing the market with mega-deals of more than $100 million;*
- *Given S&P's expansion of charter school underlying ratings to "A-", other large, sophisticated borrowers may become eligible for higher ratings;*
- *Higher average par amount—2019 ended with an all-time high per transaction average par amount of over $24 million;*
- *Continued high percentage of unrated credits coming to market;*
- *Rating downgrades and negative outlooks likely to follow any material cuts or deferments in per pupil revenue;*
- *Shorter call dates on more transactions—down from the long-standing custom of 10 years—this trend could reverse if tax law is changed allowing once again for advance refundings;*
- *Fewer refunding transactions given the low 2010 and 2011 issuance levels combined with current proscription of advanced refunding transactions in the tax-exempt bond market;*
- *Greater use of out-of-state issuers due to political headwinds; and*
- *Relatively stable default rate on a transaction count basis with continued declining trend based on original par amount.*

2019 Overview

In 2019, the charter school tax-exempt bond sector registered another record volume year with issuance exceeding $3.7 billion—up from almost $3 billion in 2018 and representing a robust 25% increase. This past year's record volume was the seventh annual record out of the last eight years.



Annual Charter School Bond Issuance through December 31, 2019

Specifically, 2019's $3.712 billion of charter school issuance comprises 153 distinct transactions—up from 130 in calendar year 2018, a 17.7% increase. While the $3.712 billion[1] of tax-exempt bond issuance was a record, the 153 transaction count was not. That record still belongs to 2017 when 159 issues were executed with an end-of-year rush due to federal tax law changes. In addition, the range in transaction par amount was not as wide in 2019 as in prior years—spanning from $4.35 million to over $214 million.

The smallest transaction of $4.35 million—was issued on behalf of Hampden Charter School of Science West in Massachusetts. This deal was the sole transaction below $5 million in 2019 although there were another 29 small transactions (defined as those having a par amount below $10 million) issued last year.

On the other end of the spectrum was the $214,165,000 deal sold by Baird and BB&T in August 2019 on behalf of IDEA Public Schools of Texas, a 120 school organization with more than 63,000 students—one of the largest charter school networks in the country. The transaction was credit-enhanced by the "triple-A" rated Texas Permanent School Fund (PSF). Of note, the underlying

[1] Figures exclude permanently fully taxable transactions as well as tax-exempt notes.

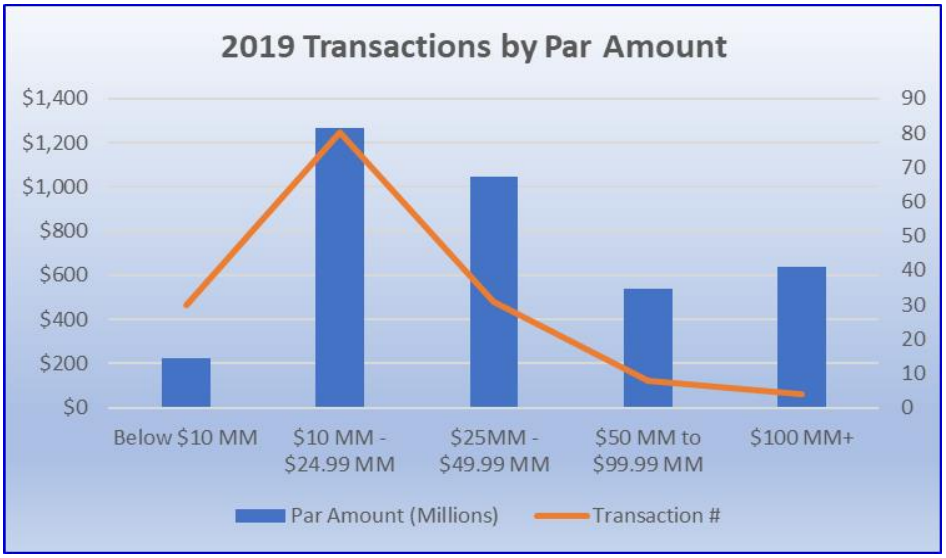
assigned rating of "A-" is the highest charter school unenhanced rating that S&P has assigned to date. The IDEA Public Schools rating was upgraded from "BBB+" in 2019.

In addition to IDEA's super mega deal of over $214 million, there were three other transactions above $100 million: Riverwalk Education Foundation (Texas) for $176.26 million sold by PNC, BB&T, and RBC and rated "AAA" due to the presence of a PSF guaranty; Legacy Traditional Schools (Arizona and Nevada) for $141.945 million sold by RBC that had a split rating of '"AA-" for the $37.645 million portion that was enhanced by the Arizona Public School Enhancement Fund and a rating of "Ba2" on the $104.3 million portion that was unenhanced; and finally, KIPP Texas, a $106.185 million deal sold by RBC that also rated "AAA" due to a PSF guaranty. These four mega deal transactions combined for a total par amount of $638,555,000, representing 17.2% of all 2019 volume.

Top 10 Largest Transactions of 2019		
State	Project	$ Par Amount (millions)
TX	IDEA Public Schools	$214,165,000
TX	Riverwalk Education Foundation	$176,260,000
AZ, NV	Legacy Traditional Schools	$141,945,000
TX	KIPP Texas Inc.	$106,185,000
TX	Great Hearts America Texas	$93,350,000
TX	Uplift Education	$91,090,000
FL	Renaissance Charter School	$85,980,000
DC	KIPP DC	$61,325,000
AZ	Leman Academy of Excellence Inc./East Tuscon	$53,455,000
TX	Pioneer Technology & Arts Academy	$53,000,000

There were also eight deals issued with par amounts between $50 million and $100 million, totaling $540 million. The top 10 transactions last year totaled just shy of $1.1 billion, representing 29% of the entire annual volume. Texas charter schools continue to dominate issuance and were responsible for six of the top ten transactions.

While the deals continue to get bigger, the bulk of charter school bond volume continues to range between $10 million and $25 million. Indeed, there were 80 distinct transactions within this range totaling just over $1.2 billion and representing just over half of all transactions. Following closely behind in terms of par amount was the category between $25 million and $49.99 million, with 31 distinct transactions and totaling just over $1 billion of par.



Next was the "below $10 million" category with 30 transactions with a par amount totaling approximately $223 million. Last year, this category included eight deals under $5 million while 2019 only had one below this threshold, the $4.35 million Hampden Charter School of Science West in Massachusetts. This broad range of dollar amounts results in an average par transaction amount of $24.3 million—up from $23 million in 2018 and a materially lower median transaction amount of $16.2 million—up from $15 million a year ago.

Issuance Highly Concentrated in a Handful of States

As was the case in 2018, charter schools in 25 jurisdictions came to market in 2019, however, there was significant variation from year to year. New states represented in 2019 were Delaware, Georgia, and Rhode Island as well as the District of Columbia. States that had activity in 2018 but not in 2019 were Arkansas, Idaho, Illinois, and Ohio.

STATE[1]	#[2]	% of Total Transactions	$	% of Total Par	MEDIAN PAR
Arizona	22	14.3%	$554,065,000	14.9%	$17,690,000
California	11	7.1%	$296,556,590	8.0%	$26,576,590
Colorado	20	13.0%	$295,204,918	8.0%	$10,762,500
Delaware	1	0.6%	$12,645,000	0.3%	$12,645,000
District of Columbia	4	2.6%	$166,040,000	4.5%	$39,720,000
Florida	15	9.7%	$304,684,031	8.2%	$14,585,000
Georgia	2	1.3%	$21,895,000	0.6%	$10,947,500
Indiana	1	0.6%	$11,725,000	0.3%	$11,725,000
Louisiana	3	1.9%	$68,156,994	1.8%	$23,540,000
Maryland	1	0.6%	$26,000,000	0.7%	$26,000,000
Massachusetts	4	2.6%	$87,640,000	2.4%	$17,150,000
Michigan	3	1.9%	$32,860,000	0.9%	$10,755,000
Minnesota	7	4.5%	$87,675,000	2.4%	$13,140,000
Nevada	5	3.2%	$148,240,000	4.0%	$17,865,000
New Jersey	2	1.3%	$49,715,000	1.3%	$24,857,500
New Mexico	1	0.6%	$13,280,000	0.4%	$13,280,000
New York	4	2.6%	$81,925,000	2.2%	$17,470,000
North Carolina	11	7.1%	$208,340,000	5.6%	$22,405,000
Oregon	2	1.3%	$11,825,000	0.3%	$5,912,500
Pennsylvania	7	4.5%	$165,945,000	4.5%	$22,415,000
Rhode Island	1	0.6%	$16,000,000	0.4%	$16,000,000
South Carolina	4	2.6%	$46,505,000	1.3%	$11,145,000
Tennessee	2	1.3%	$17,782,964	0.5%	$8,891,482
Texas	15	9.7%	$882,860,234	23.8%	$25,000,000
Utah	6	3.9%	$104,500,982	2.8%	$17,416,830
Total	154	100.0%	$3,712,066,713	100.0%	

[1] Borrowers that accessed out-of-state issuers are categorized in their home state—not the state of the issuer.
[2] Count is higher than overall total due to single offering financing schools in two states.

Despite the change in state participation in 2019, the bulk of charter school bond issuance continued to be heavily concentrated in only a handful of states. The top five states in transaction count represented 53.9% of all activity, while the top five states on a volume basis totaled 62.9% of total par. This is an increase from 2018 when these top five states accounted for 48.8% and 53.6% in transaction count and volume, respectively. For those active states, the number of transactions and the par amount from each jurisdiction varied widely with Arizona, California, Colorado, Florida, and Texas, making the top five in both number of transactions and volume.

The top five transaction states were Arizona, Colorado, Florida, Texas, and California, in that order. Arizona charter schools executed the greatest number of transactions, 22 in 2019 (almost doubling from 12 in 2018), followed by Colorado at 20 (doubling from 10 in 2018). Both Florida and Texas had 15 transactions—both states up from 13 and 11 a year ago, respectively. Finally, California schools were responsible for 11 deals—down from 16 in 2018.

Other states with noteworthy increases in the number of transactions were the District of Columbia (4)—up from 0 in 2018, Pennsylvania (7)—up from 4, South Carolina (4)—up from 1, Louisiana (3)—up from 1, Georgia (2)—up from 0, and North Carolina (11)—up from 9. Notable decreases included New Jersey (2)—down from 7, New York (4)—down from 6, and Michigan (3)—down from 5.

In 2019, more charter schools than ever went out of their home state to issue bonds. Specifically, 23% of the number of transactions, or 34 deals, were issued by conduits for out-of-state charter schools. The vast majority of these transactions, 28, were issued by Public Finance Authority in Wisconsin with the remaining six executed by three separate Arizona conduits. These deals represented almost $680 million, or 18.3% of total volume—up from $375 million and 12.7% in 2018.

Charters in the following states sought out-of-state conduit issuers to access the tax-exempt bond market: Arizona (1 out of 22), Colorado (13 out of 20), Georgia (1 out of 2), Nevada (5 out of 5), New Mexico (1 out of 1), North Carolina (11 out of 11), Texas (1 out of 15), and South Carolina (1 out of 4). Charter schools typically opt to utilize an out-of-state issuer due to ease or cost savings, while others are forced to use an out-of-state entity due to local opposition or stringent conduit requirements, e.g., minimum rating levels.

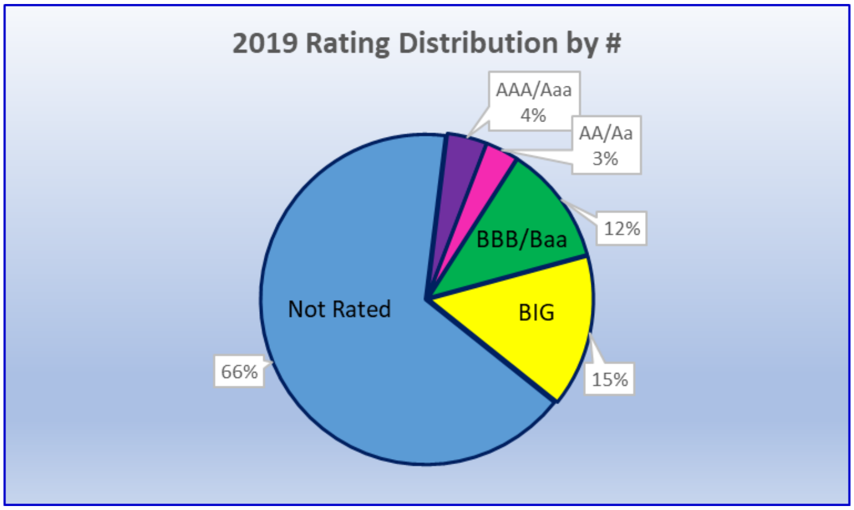
Although Texas came in fourth for the number of transactions issued, it is in a very different position on a par basis, ranking first by a landslide with $882.9 million of bonds issued. This figure represents 23.8% of the year's total volume and is only slightly higher than the State's 2018 total par amount of $837.9 million. While Texas issuance was only slightly ahead of last year's volume, the State had more 2019 transactions (15 versus 11) compensating for the absence of the $357 million super mega deal that boosted 2018 Texas issuance tremendously.

Well behind Texas, in second place for volume, was Arizona with just over $554 million—up materially from $258 million in 2018, and representing 15% of total 2019 par. The top five states rounded out with Florida at $305 million (8.2% of total par), California at $297 million (8% of total par), and Colorado at $295 million (8% of total par). This past year, Nevada fell out of the top five states for volume, replaced by Florida.

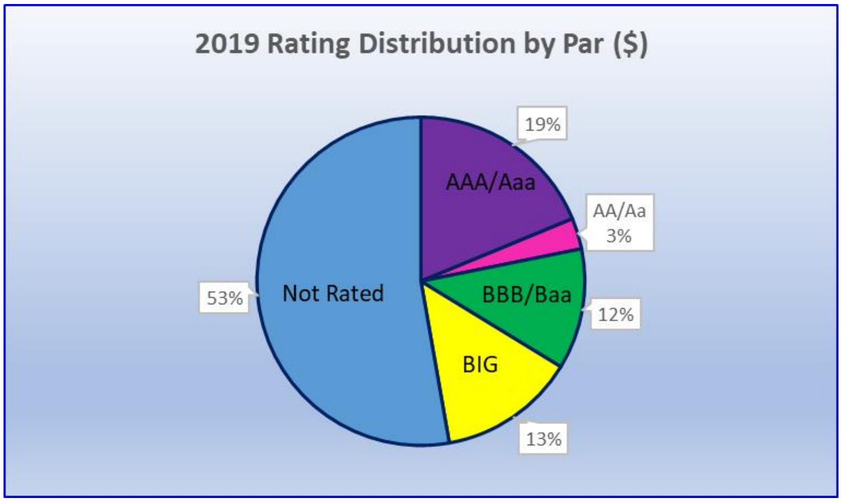
While the overall median par amount was $16.4 million, individual state medians varied greatly depending on jurisdiction. Charter schools in the 25 states that accessed the municipal market in 2019 had medians that ranged from a low of $5.9 million for two deals in Oregon to a high of $39.7 million for the District of Columbia based on four transactions. Other states with median par amounts of more than $20 million were: California at $26.6 million (11 issues); Maryland at $26 million (single issue); Texas at $25 million (15 issues); New Jersey at $24.9 million (2 issues); Louisiana at $23.5 million (three issues); Pennsylvania at $22.4 million (seven issues), and North Carolina at $22.4 million (11 issues).

STATE	MEDIAN PAR
District of Columbia	$39,720,000
California	$26,576,590
Maryland	$26,000,000
Texas	$25,000,000
New Jersey	$24,857,500
Louisiana	$23,540,000
Pennsylvania	$22,415,000
North Carolina	$22,405,000
Nevada	$17,865,000
Arizona	$17,690,000
New York	$17,470,000
Utah	$17,416,830
Massachusetts	$17,150,000
Rhode Island	$16,000,000
Florida	$14,585,000
New Mexico	$13,280,000
Minnesota	$13,140,000
Delaware	$12,645,000
Indiana	$11,725,000
South Carolina	$11,145,000
Georgia	$10,947,500
Colorado	$10,762,500
Michigan	$10,755,000
Tennessee	$8,891,482
Oregon	$5,912,500

Although Sector Continues to Be Mostly Unrated, Percentage of Rated Transactions Increased Compared to 2018



The charter school sector continued to see the vast majority of deals go to market without ratings. In 2019, 65.6% of the number of transactions went to market without ratings—down somewhat from 74.4% in 2018. These metrics highlight the solid appetite investors had in 2019 for unrated paper that prevails in today's market, albeit at a somewhat lower threshold. Moreover, the highest number of rated deals, 23 of them, were below investment grade—all in the "BB"/"Ba" categories from S&P and Moody's, respectively.



On a volume basis, the numbers were materially different, with roughly an even split between rated and unrated. Specifically, $1.9 billion of total par, representing 52.4% of volume went to market unrated while $1.8 billion of total par, representing 47.6%, was rated. These metrics contrast with last year's when a materially higher 64% was unrated due, in part, to a number of super mega deals that sold unrated, including the $357 million International Leadership of Texas transaction.

One of the primary reasons why so many charter school transactions borrow on an unrated basis is simply due to strong demand for high yield municipal debt. As a result, sector investors continue to purchase unrated bonds at relatively reasonable effective interest rates for charter school borrowers. Indeed, while unrated, higher risk charter school credits still had to pay as much as 8.5% for 30 year bonds (Athenian Academy Charter School in Florida banked by R.

Seelaus &Co.), the median yield for the 136 transactions with information available, was 4.5%. There were 41 transactions, totaling over $1.5 billion, that had yields to call at 4% or below. The year's lowest yield was garnered by the $10.29 million Highland Prep Academy (Arizona) transaction, sold by Ziegler, had a yield to call of 2.65% for bonds maturing in 2050. These bonds were credit enhanced by the Arizona Public School Credit Enhancement Program and rated "AA-" by Standard & Poor's.

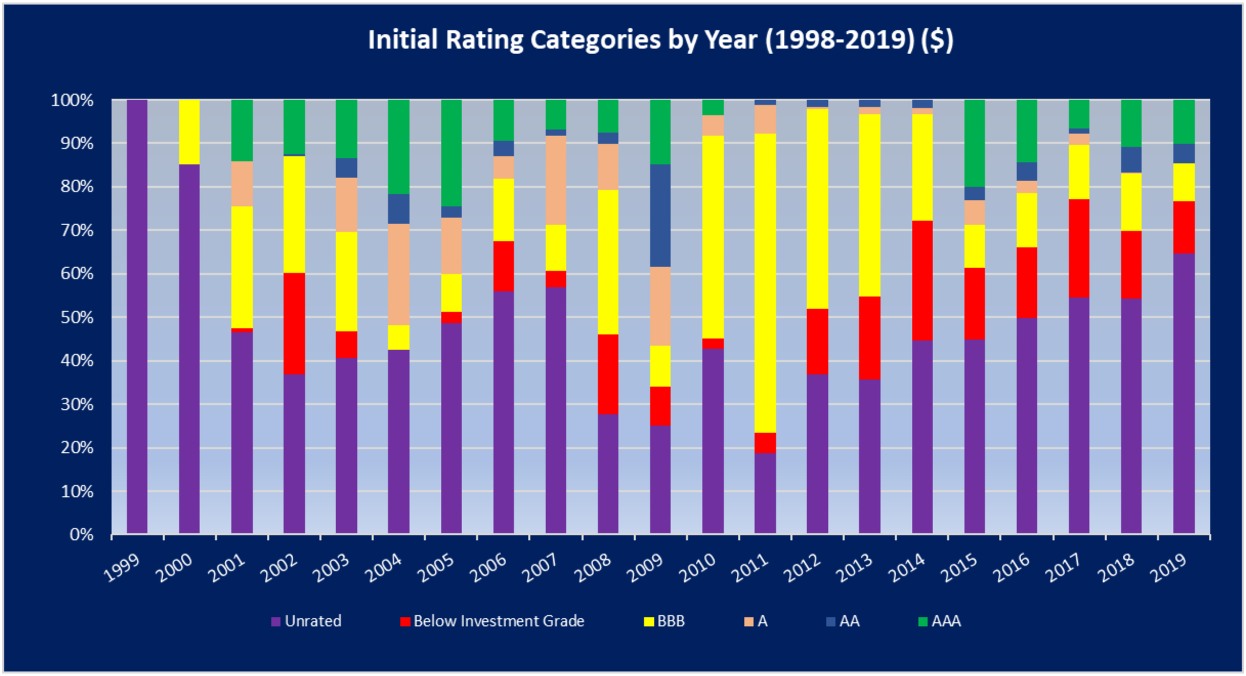
As evidence that this strong investor appetite for high yield paper continued to be high in 2019—and the relative ease with which bankers can place low-rated or unrated paper, 81.2% of transactions were either rated below investment grade (14.9%) or unrated (66.2%). These metrics are in-line with 2018's percentages of 10.1% and 74.4%, respectively.

Of the rated issues, the below investment grade category once again represented the most prevalent rating category based on both the number of transactions as well as par amount. A total of more than $500 million was issued with below investment grade ratings, representing 23 offerings. All of these ratings were in the "BB"/"Ba" class. Specifically, 12 were in the highest "double B" level of "BB+/Ba1", 10 transactions were rated at the "BB"/"Ba2" level, with only one rated at the lowest level of "BB-".

As with prior years, all of the 2019 ratings in the "triple A" category were due to the presence of the "triple-A rated" Texas Permanent School Fund. For 2019, six transactions were PSF guaranteed, totaling just shy of $700 million—a material increase from 2018 when only three deals totaled just over $300 million.

The "double A"—rated category included five separate transactions enhanced by state programs in Utah, Colorado, and Arizona, including one for Summit Academy for approximately $41 million that was enhanced by the State of Utah Moral Obligation Program that is rated "AA" by S&P. Another three deals, totaling $62.2 million, were enhanced by the State of Arizona Public School Credit Enhancement Program which is rated "AA-" by S&P.

Finally, one transaction totaling $10.4 million was enhanced by the State of Colorado Moral Obligation Program and assigned a "Aa3" rating by Moody's. Of note is that in 2018, the Colorado program was assigned a rating of "Aa3" by Moody's—higher than S&P's rating of "A+", resulting in separate rating categories. Based on this split between the two credit rating agencies, virtually all future Colorado moral obligation program transactions will be rated by Moody's rather than S&P given the likely interest rating savings that will accrue to schools that a higher bond rating can produce. Unlike in prior years, there was no transaction rated in the "A" category.



As the chart above demonstrates, the rating profile of the charter school sector over the past 22 years has been highly cyclical and clearly shows the trends in initial rating assignments over time. The first three years, 1998 to 2000, were characterized by an almost exclusively unrated sector. During the next period, from 2000 to the 2008 credit crisis, there was a heavy presence of private credit enhancers, including bond insurers, particularly ACA Financial Guaranty Corporation, as well as banks offering letters of credit. From 2009 to 2013, the private credit enhancers exited the market (and with this trend, virtually no highly-rated transactions) and the vast majority of transactions were in the low investment grade category of "triple-B" as investors demanded higher quality, investment grade credits.

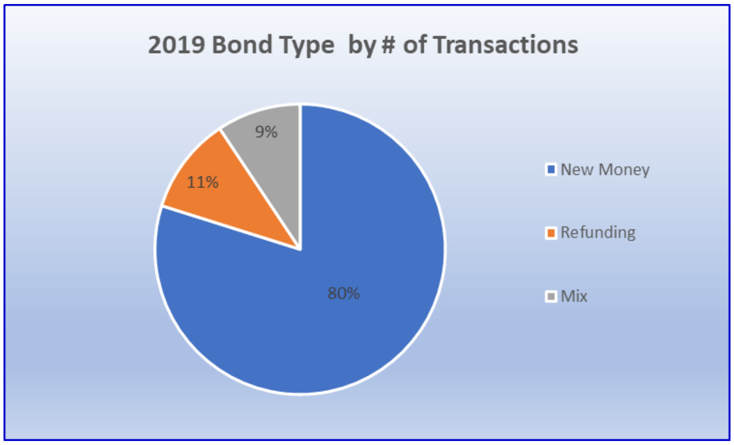
Starting in 2014—with the formal eligibility for charter schools to benefit from the Texas PSF Guarantee Program, however, a much higher percentage of initial ratings was assigned in solid investment grade categories, including the highest levels of "AAA"/"Aaa" and "AA"/'Aa". Credit-worthy schools in Colorado, Utah, and Texas (with underlying investment grade ratings, i.e., 'BBB-"/Baa3" or higher) as well as eligible, high-achieving schools in Arizona—all states with significant charter school activity—can access their individual state's credit enhancement program (subject to any program capacity constraints), resulting in materially higher ratings ranging from categories "A" to "AAA", thereby significantly reducing interest costs. As a result, there are fewer “BBB” ratings than there would otherwise be, replaced with credit-enhanced ratings.

S&P continued to rate the lion’s share of rated transactions with 40 in 2019, representing 74.1% of all rated deals. After reentering the sector in 2016, Moody’s is still playing market-share catch-up with 17 ratings, representing 29.6%—up from 24.2% in 2018. On a par basis, Moody’s rated almost $388 million of new issuance, representing 22.1% of total rated volume versus 77.6% for S&P. Fitch again had no new assigned ratings in 2019 and the year saw two transactions with dual ratings.

Finally, transactions with MAs were much more likely to be rated. Indeed, for those borrowers that went to market with the advice of a MA, 60% obtained a rating versus only 36.3% of deals sold without a participating financial advisor.

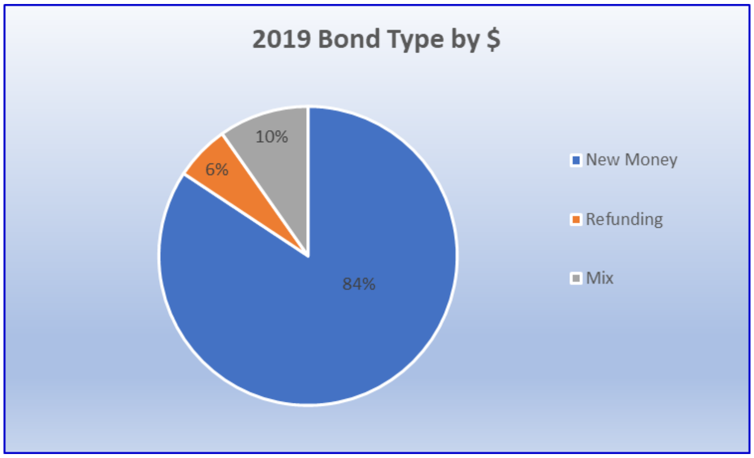
Type of Bonds

Based on information contained in publicly available official statements, on both a transaction count basis as well as volume, 2019 activity was overwhelming focused on new money[2] purposes, i.e., the first time the project was financed by tax-exempt bonds. Specifically, proceeds used exclusively for new money purposes represented 79.9% of all transactions with publicly available uses—down slightly from 81.5% in 2018. Another 9.4% of 2019 issues represented a mix of new money and current refunding proceeds. Indeed, only 9.4% of all transactions in 2019 with publicly available information was used exclusively for refunding prior tax-exempt bonds.



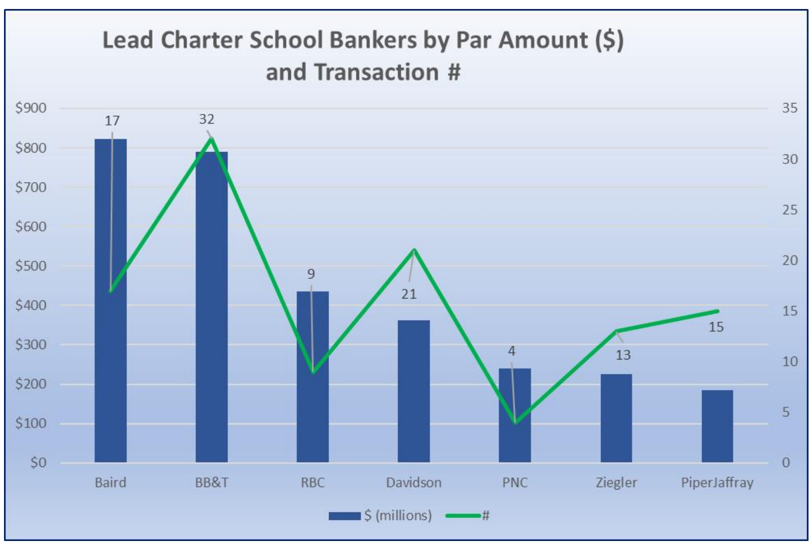
[2] *For analytical purposes, the term “new money” bonds is defined as those bonds whose proceeds are financing the acquisition of, or capital improvements to, a school facility on a tax-exempt basis for the first time. A significant number of transactions are issued annually to refinance prior debt including outstanding bank loans, CDFI loans, and taxable bonds. Unless the new bonds refund prior tax-exempt bonds, they are included in the new money bond category.*

If the share of new money is analyzed on a par basis, the results are very similar. Specifically, 84.3% of proceeds were for new money projects versus 81.5% and 62.5% in 2018 and 2017, respectively. And due to anemic sector bond volume back in 2009, we do not expect much refunding activity at the 10 year call dates for these bonds in the coming year. Absent a change in tax law reversing the 2017 prohibition on tax-exempt financed advanced refundings, the percentage of new money bonds will likely continue to rise in 2020 and beyond.



Underwriting Activity Reflects a Mix of Highly Experienced Firms and One-Off Sector Transaction Engagements

In 2019, charter schools and their affiliated organizations relied on 22 separate investment banking firms to underwrite or place their tax-exempt bonds. This figure is up from 19 firms in 2018. And while banker competition is generally a plus for charter school borrowers—as it helps drive down underwriting fees—it is notable that 2019 underwriting activity was a stark contrast between a few highly experienced firms that did a significant number of transactions and those that did only one or two transactions with only two firms doing between three and seven deals each. Of the 133 transactions with known underwriters, three quarters of charter school bond transactions with a known underwriter were executed by only five firms, i.e., BB&T (32—the highest annual deal count by a single firm in the sector's history), D.A. Davidson (21), Baird (17), Piper Jaffray (15) (now Piper Sandler), and Ziegler (13).

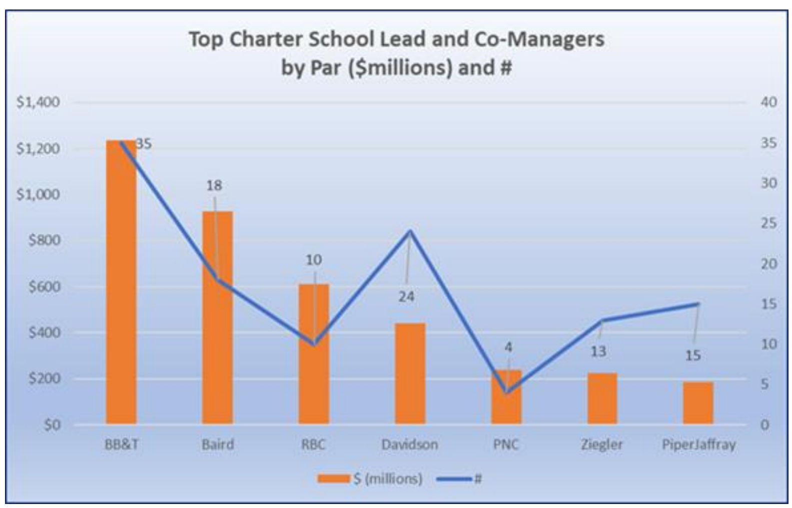


Eleven other firms executed only a single charter school transaction with two banks responsible for only two transactions each. Three other firms accounted for between two and nine deals.

On a par amount basis using the same universe, the top five firms accounted for 71.4% of all transactions. Specifically, the top bankers were Baird ($821.7 million), BB&T ($790.2 million), RBC ($435.3 million), D.A. Davidson ($362.6 million), and PNC ($239 million). The top eight firms accounted for an extraordinary 87.3% of par issued. Thus, 15 remaining firms executed less than $200 million of par or 5.2% of 2019 volume. The chart above shows seven firms that include both the top five bankers by number of transactions and the top five bankers by total par amount with three firms in both categories.

In the last two years, the charter school sector has started to mirror the general municipal market with more co-managed transactions. Deals with one, two, or three banking firms have become more prevalent, as the average deal size increases—particularly for mega deals that exceed $100 million. Utilizing more than one banker allows for a broader sales force and investor base to place the bonds—particularly for larger size transactions. Indeed, in 2019, four of the top 10 transactions had co-managers, including the largest deal from 2019, the IDEA Public Schools of Texas at over $214 million with Baird as lead banker and BB&T as co-manager.

In all, eight transactions came to market with more than one investment bank involved in the execution of the bond sale, including smaller transactions such as the $7.5 million for Capital Encore Academy (North Carolina) where Piper Jaffray was lead banker and Herbert J. Sims was co-manager. The chart to the right shows the results of giving full credit to each participating banking firm. One firm, BB&T, participated in the most co-managed deals at three with Baird and D.A. Davidson with two each. By giving credit to BB&T for its role as co-manager on these transactions, the firm moves up to the top of the list for both par amount and deal count. RBC also had one co-managed transaction which increased its overall total to more than $600

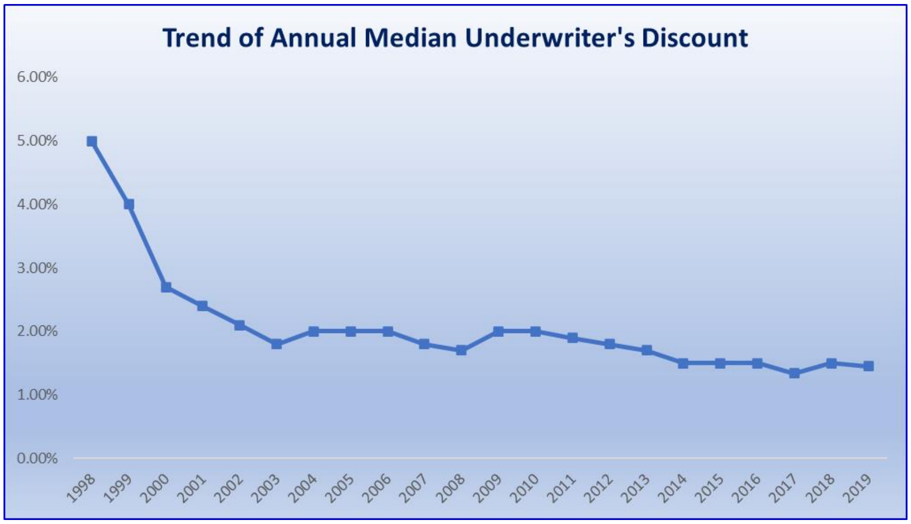


million. Finally, RBC was also the sole banker on the $111.725 million transaction for the Equitable School Revolving Fund. This figure, however, is not included in this investment firm

ranking and analysis given its proceeds reimbursed a not-for-profit lender to charter schools rather than directly to charter borrowers.

Some changes have occurred recently affecting some of the top charter school sector banking firms. First, the merger of BB&T and SunTrust resulted in a rebranding of the corporate entity, now Truist Securities Inc. BB&T Capital Markets began to use the Truist Securities moniker in 2020 for charter school underwriting engagements. In addition, Stifel acquired the investment banking assets of George K. Baum in September 2019. On a combined basis, Stifel and George K. Baum separately underwrote a total of nine charter school issues totaling just over $208 million.

Based on publicly available data for 122 transactions, 2019 showed a median underwriter's discount of 1.45%—down modestly from 1.50% in 2018 and generally in-line with the benchmark metrics in recent years. Individual underwriting spreads ranged from a low of 0.27% underwritten by D.A. Davidson for the unrated $24.1 million Aurora Charter School transaction in Colorado to a high of 3.0% for the unrated $7.47 million Capital Encore Academy deal in North Carolina that was issued through the Public Finance Authority of Wisconsin and executed by Piper Jaffray as lead underwriter and co-managed by Herbert J. Sims. The mode was 1.50% which was the spread on 16 deals, representing 13.1% of all 2019 transactions.

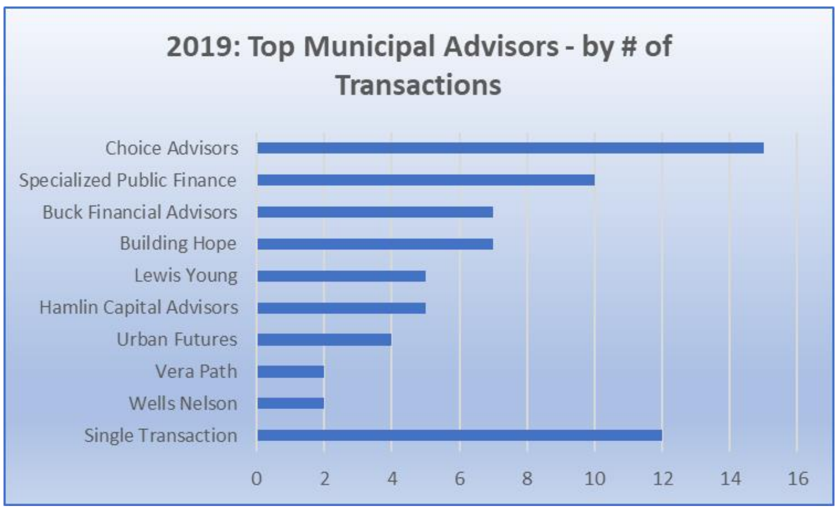


It is notable that bifurcating the 122 transactions into those with and without MAs results in two very different medians. For those 56 transactions with MAs, the median was 1.24%. This figure contrasts with the 1.50% median for the 66 transactions without a financial advisor.

Municipal Advisors Participated on Roughly Half of Transactions

Municipal Advisors continued to be engaged on approximately half of charter school transactions in 2019. Of the 139 transactions with publicly available information, i.e., official statements that generally disclose the existence of a financial advisor, 68 issues—or 48.9%, reported financial advisors representing charter schools or their affiliated organizations. This figure is down somewhat from 53.3% in 2018. On a par basis, the influence of municipal advisors is even higher—assisting on over $2 billion of bonds, representing 58.2%—also down slightly from 62.4% in 2018.

Twenty-one separate MAs assisted charter schools—up from 19 in 2018. Of these 21, the range in the number of engagements ranged from a low of one to a high of 15. Twelve of these 21 firms, however, participated in only a single transaction. The lead financial advisor in this sector in 2019 was Choice Advisors which advised on 15 tax-exempt transactions, totaling approximately $281.4 million. Following Choices was Specialized Public Finance with 10 transactions ($229.4 million).



On a par basis, Buck Financial Advisors topped the list with $517 million of par over seven tax-exempt transactions. Six of these transactions utilized investment bankers and all six were underwritten by a single firm, Baird. Of the 11 firms that had multiple transactions in 2019, Buck was the only one that used a single investment bank to underwrite the public transactions for which they served as advisor—down from four a year ago.

One reason often cited to engage a MA is to manage and limit certain costs of issuance, particularly underwriting fees. It appears that the presence of a financial advisor did indeed make a difference on this metric in 2019. Specifically, the median underwriting fee for all 154 transactions was 1.27%. For transactions without a financial advisor, the median was 1.50%

versus those deals that had a MA where the median was materially lower at 1.02%. of course, borrowers should review the added fee of the MA when determining total costs of issuance.

Default Rates Mixed

During 2019, we identified six new charter school monetary defaults, i.e., where the charter school borrower (or an affiliated entity) missed one or more scheduled debt service payments. These six defaults total $80.3 million in original par. As with previous defaults, most were due to either substandard academic performance or strained financials or both. Adding these to previously identified defaults, as of December 31, 2019, a total of 78 charter school transactions have defaulted totaling more than $800 million of original par.

This data results in a preliminary default rate of 5.0% based on the number of transactions and a 2.7% analyzing it by total dollar amount issued. The 5% metric based on the number of issues is unchanged from two years ago, while the 2.7% benchmark based on volume strengthened from the end of 2017 when it stood at 3.2%. This improvement is due primarily to the increase in large transactions regularly issued by mature and sophisticated borrowers whose credit profiles are materially better than the average charter school.

The following chart summarizes those issues that defaulted in 2019:

Rating at Issuance	Cusip	Dated Date	State	Project	Par Amount at Issuance	Underwriter or Placement Agent	Reason for Default
BBB- (Fitch)	72177MKW6	4/13/2010	AZ	Cambridge Academy East	$8,445,000	D.A. Davidson	Declining enrollment; strained financials
NR	19645RWG2	3/1/2014	CO	Vanguard Classical	$32,365,000	D.A. Davidson	Balloon payment missed; bonds were subsequently refunded
NR	14054CBD0	11/29/2018	FL	Championship Academy of Distinction (Davie)	$8,910,000	R. Seelaus	Low enrollment; very weak financials; and revocation by SD due to safety issues that were subsequently overturned;
NR	14054CBF5	12/20/2018	FL	Championship Academy of Distinction of West Broward	$8,800,000	R. Seelaus	Financial stress
NR	45129GCX1	5/11/2017	ID	Village Charter School	$5,080,000	Alamo Capital	Financial stress
BB- (S&P)	788326AD8	4/8/2016	MN	Stride Academy	$16,690,000	Dougherty & Company LLC	Non-renewal was due to poor academic performance

During 2021, EFF expects to present a more robust default analysis, including status of all defaulted transactions.