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Credit Rating and Geography: Examining the Timeliness of Municipal Bond Audits

Deborah A. Carroll, Ph.D.

Director, UIC Government Finance Research Center

Richard A. Ciccarone

President Emeritus, Merritt Research Services, an Investortools company



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SUMMARY OF MAIN FINDINGS

- The median audit time for all municipal bond sectors has increased nearly 10.5% over time, from 152 days in 2011 to 168 days in 2022, worsening the median audit time by 16 days.
- Issuers in the governmental bond sectors have generally slower median audit times compared to issuers in the revenue bond sectors.
- There is a direct correlation between audit timeliness and credit rating for all governmental bond sectors and six of ten revenue bond sectors, with higher rated issuers producing more timely audits.
- Among the governmental bond sectors, issuers in New York have the fastest median audit time, while those in Mississippi have the slowest.
- The overall higher medians of municipal bond audit times in 2022 marks a 12-year high, despite repeated transparency complaints and ongoing concern by municipal bond investors and government watchdog groups.



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RESEARCH BRIEF

Introduction

Stakeholders ranging from bond investors to government watchdogs to regulators have regularly called for faster audit times from municipal bond issuers. Timeliness in audit reporting is an important indicator of good governance and stewardship, as it is critical for credit evaluation and proper pricing in the municipal bond market. Corporate bond issuers have median audit times averaging 60 to 90 days (as regulated by the U.S. Securities and Exchange Commission by corporation size) between fiscal year-end and the date of the Independent Auditor's signature. By contrast, municipal bond issuers normally take two to three times longer—140 to 180 days—to complete their audits.

In the interest of recognizing and encouraging timely transparency, since 2007, [Merritt Research Services, an Investortools company](#) has been tracking and reporting on the time it takes for municipal bond-related audits to be completed and signed after the fiscal year ends. In 2022, Merritt Research Services partnered with the [Government Finance Research Center](#) at the University of Illinois Chicago.

For purposes of this analysis, we define audit time as the number of days stretching from the end of the fiscal year to the date of audit signing, regardless of its posting date in the Electronic Municipal Market Access (EMMA), which is the endpoint used by the Municipal Securities Rulemaking Board (MSRB) for their audit time calculations. In addition, we exclude from our analysis all municipal bond issuers with financial statements that do not comply with Generally Accepted Accounting Principles (GAAP).

In this year's report, we first offer an overview of audit time trends since 2011. We then recognize the timeliest audits for the 2022 fiscal year, grouped by municipal credit sector, from more than 11,000 municipal bond audits in the Merritt Research Services database found in [CreditScope](#).¹ Finally, we conduct correlational analysis to examine the potential connection between credit rating and audit timeliness, as well as provide a geographical illustration of median audit times across the U.S. states for governmental bond issuers.

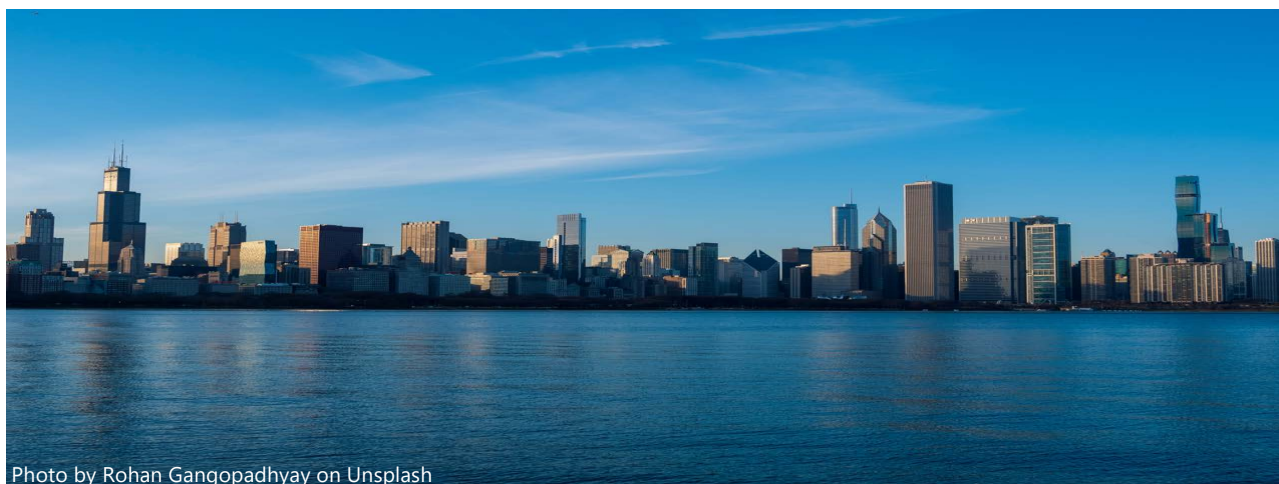


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¹ It should be noted that the number of issuers with audited financial statements submitted to the Merritt Research Services database varies from year to year. In addition, our sample size increased this year, because the minimum population size for governmental bond issuers was lowered to 20,000 compared to the previous minimum population threshold of 30,000.

Historical Trends

Revenue Bond Sectors

Table 1 shows the median audit times (in days) of select revenue bond sectors compared to all municipal bond sectors combined (including both revenue and governmental bond issuers in the last column) for each year 2011–2022, with these historical trends also illustrated in Figures 1 and 2. For the first time this year, we are able to include the life care sector (e.g. continuing care retirement communities) in our analysis, which was impressively the second fastest revenue bond sector in 2022. However, there are no historical data for this sector to illustrate its audit timeliness trend over the years, so it is excluded from Figure 1.

According to Table 1, the median audit time for all sectors combined has increased 10.5% over time, from 152 days in 2011 to 168 days in 2022, worsening the median audit time by 16 days. During this time, there were increases in the median audit times for issuers in every revenue bond sector except for wholesale electric. Community colleges and public higher education issuers increased their median audit times the most—by nearly 16% or 21 days—between 2011 and 2022. However, both sectors were two of only three sectors that improved their audit times between 2021 and 2022, with median audit times one day faster for each sector.

Following these two sectors, issuers in the private higher education, airports, and retail electric sectors all increased their median audit times a little over 10% or between 12 and 16 days during the 2011–2022 time period. To the contrary, the wholesale electric sector improved its median audit time by 2.8% or 3 days between 2011 and 2022, including one day faster between 2021 and 2022, as the third sector to show an improvement since last year.

Figure 1 shows that revenue bond issuers in all of the health and higher education sectors maintain faster audit times than all sectors combined (including both revenue and governmental bond issuers) represented by the bolder black line. Within the health and higher education sectors, median audit times ranged from the slowest of 162 days for community colleges in 2020 to the fastest of 110 days for hospitals and healthcare systems in both 2011 and 2012.

Figure 2 tells a slightly different story about revenue bond issuers in the transportation and utility sectors. Issuers in the retail electric, toll roads, and wholesale electric sectors maintain median audit times that, except for wholesale electric are generally slower than health and higher education, but considerably faster than all sectors combined (including both revenue and governmental bond issuers) represented by the bolder black line, whereas issuers in the water and sewer sector are generally slower compared to all other sectors.

Audit timeliness among issuers in the airports sector is more volatile, sometimes placing the sector above and sometimes placing it below the median for all sectors combined. Within the transportation and utility sectors, median audit times ranged from the slowest of 172 days for the water and sewer sector in 2022 to the fastest of 94 days in the wholesale electric sector in 2019.

Table 1. Median Audit Times (in Days) by Municipal Revenue Bond Sectors, 2011-2022

Years	Hospitals & Healthcare Systems	Life Care	Community Colleges	Private Higher Education	Public Higher Education	Airports	Retail Electric	Toll Roads	Water & Sewer	Wholesale Electric	All Sectors
2011	110	--	138	112	132	151	139	125	158	107	152
2012	110	--	138	113	138	150	142	123	153	100	150
2013	112	--	144	114	137	150	140	123	155	102	150
2014	112	--	140	114	130	144	139	123	154	100	148
2015	112	--	146	115	148	160	147	128	161	105	156
2016	111	--	141	116	145	154	145	125	161	101	154
2017	111	--	143	115	137	155	145	120	163	98	154
2018	114	--	149	116	142	158	150	123	164	100	159
2019	115	--	149	118	142	158	149	121	165	94	158
2020	118	--	162	121	148	162	152	122	167	97	167
2021	118	--	160	121	154	163	146	126	167	105	166
2022	118	117	159	124	153	167	153	133	172	104	168

Notes: The number of issuers (and commensurately the number of audits) varies from year to year. Median audit times for 2022 reflect 4,708 municipal revenue bond issuers across the individual sectors shown out of 11,039 total revenue and governmental bond issuers across all sectors (shown in the last column).

Source: Merritt Research Services, an Investortools company. Data compiled and reported from annual comprehensive audited financial reports available on April 3, 2024.

Figure 1. Median Audit Times (in Days) by Municipal Revenue Bond Health and Higher Education Sectors, 2011-2022

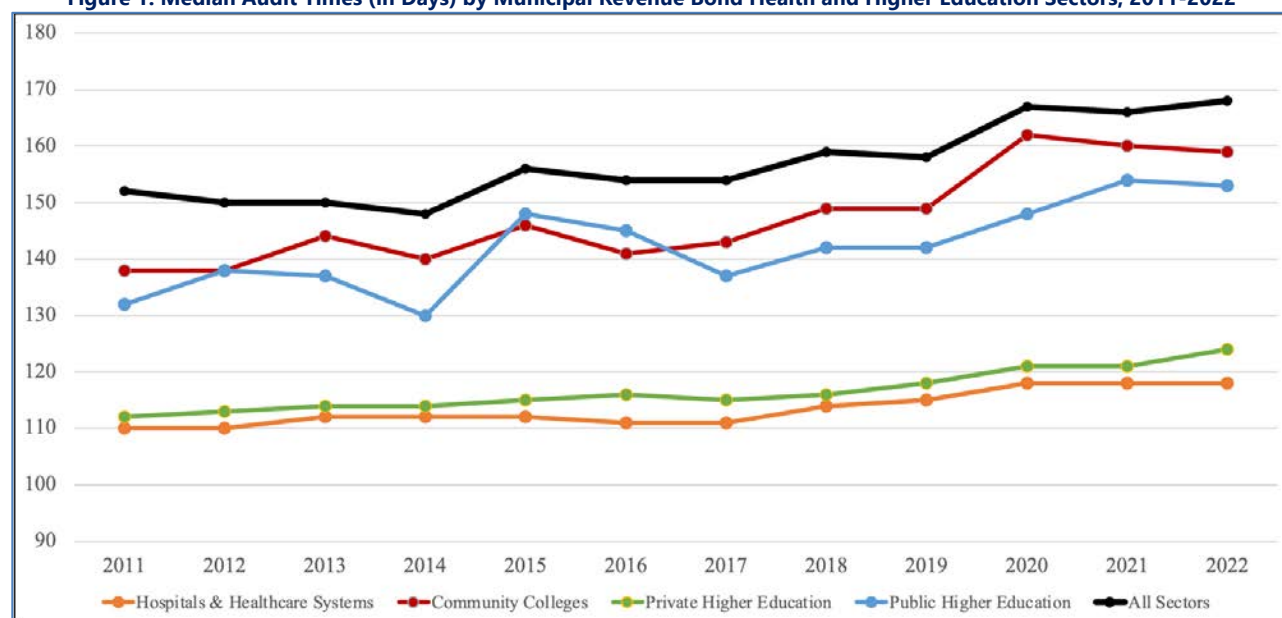
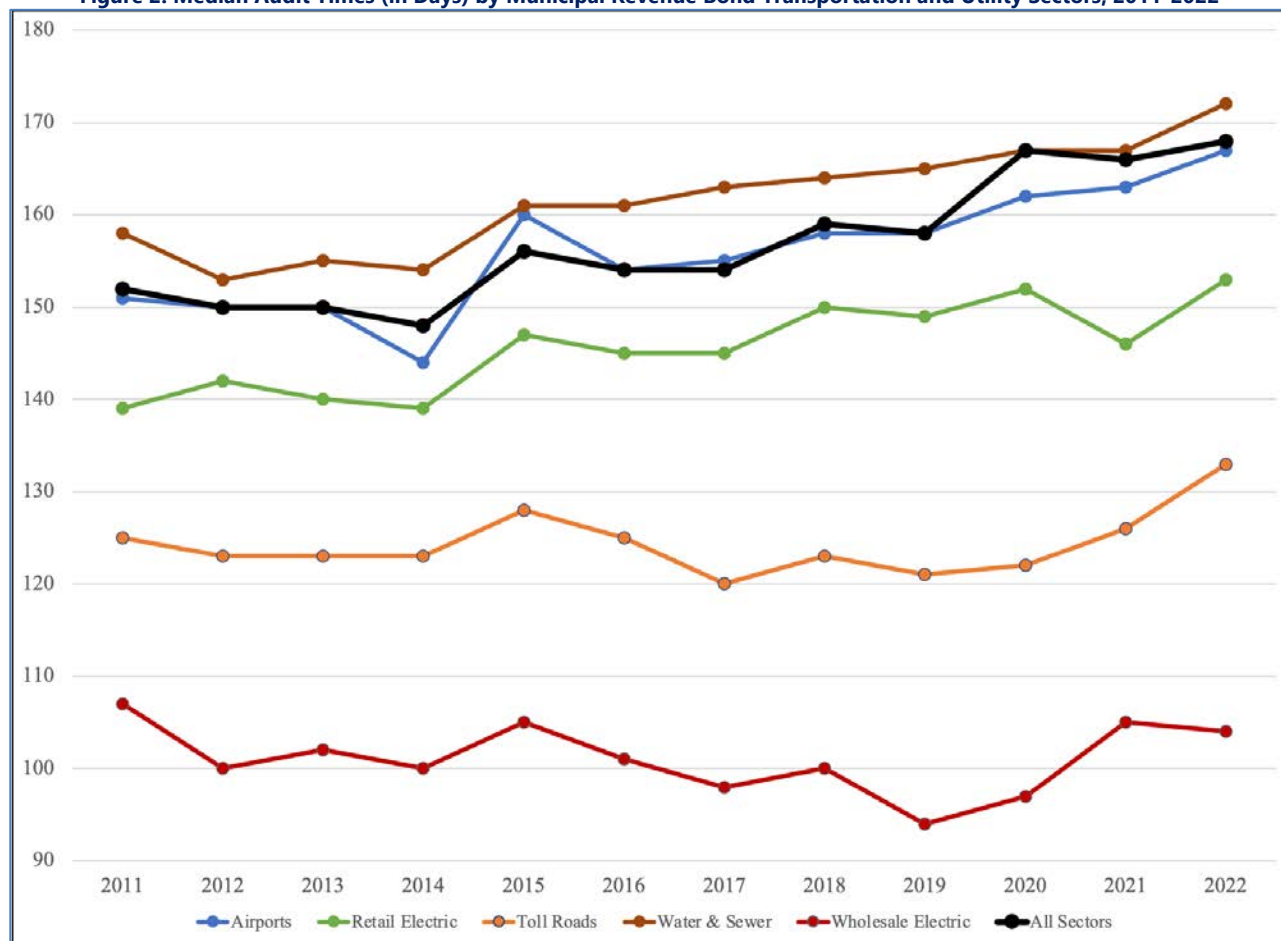


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Figure 2. Median Audit Times (in Days) by Municipal Revenue Bond Transportation and Utility Sectors, 2011-2022



Governmental Bond Sectors

Table 2 shows the median audit times (in days) of each governmental bond sector compared to all municipal bond sectors combined (including both revenue and governmental bonds in the last column) for each year 2011–2022, with the historical trends illustrated in Figure 3. As a departure from issuers in the revenue bond sectors, issuers in the governmental bond sectors generally maintain much slower median audit times, with a worsening of median audit times for every governmental bond sector between 2011 and 2022.

Except for school districts, Figure 3 shows that governmental bond issuers tend to have slower audit times than all sectors combined (including both revenue and governmental bond issuers) represented by the bolder black line, with median audit times ranging from the slowest of 209 days by counties in 2020 to the fastest of 144 days for school districts in both years 2012 and 2014. Although school districts had the fastest audit times two separate years during the time period, this sector increased their median audit time the most—by more than 14% or 21 days—between 2011 and 2022. This negative trend in timeliness is concerning because school districts comprise the largest proportion of all governmental bond issuers in our sample at 45.2%. On the other hand, this sector has generally maintained the speediest median audit times among issuers in the governmental bond sectors and was one of only two sectors to improve their median audit times since last year (by 2 days).

Following school districts, counties worsened their median audit time by 11% or 20 days between 2011 and 2022. Rounding out the three largest slowdowns among governmental bond issuers are states and territories, which worsened their median audit time between 2011 and 2022 by a little over 8% or 15 days, including increasing their median audit time since last year by 10 days.

Conversely, although median audit times in the dedicated tax sector worsened over the 2011–2022 time period like the other governmental bond sectors, the dedicated tax sector improved its median audit time the most—by three days—since last year.

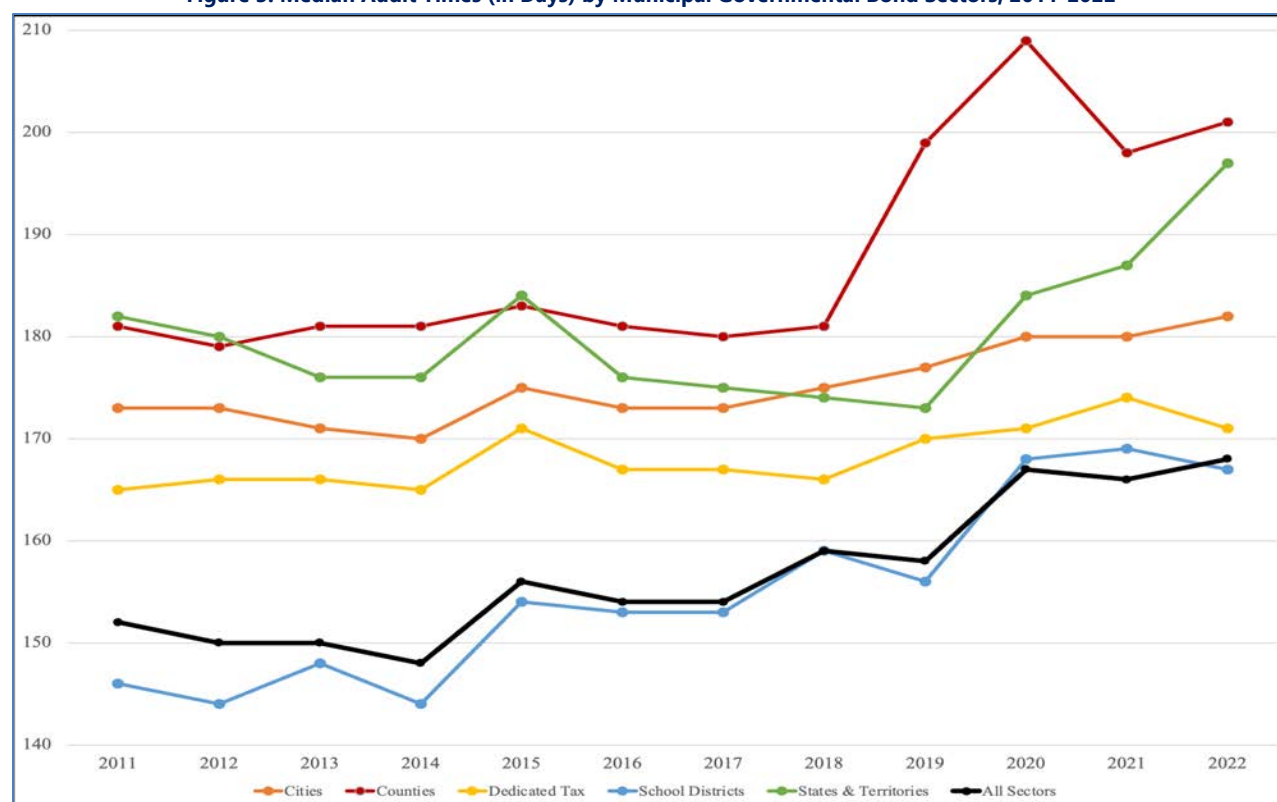
Table 2. Median Audit Times (in Days) by Municipal Governmental Bond Sectors, 2011-2022

Years	Cities	Counties	Dedicated Tax	School Districts	States & Territories	All Sectors
2011	173	181	165	146	182	152
2012	173	179	166	144	180	150
2013	171	181	166	148	176	150
2014	170	181	165	144	176	148
2015	175	183	171	154	184	156
2016	173	181	167	153	176	154
2017	173	180	167	153	175	154
2018	175	181	166	159	174	159
2019	177	199	170	156	173	158
2020	180	209	171	168	184	167
2021	180	198	174	169	187	166
2022	182	201	171	167	197	168

Notes: The number of issuers (and commensurately the number of audits) varies from year to year. Median audit times for 2022 reflect 6,331 municipal governmental bond issuers across the individual sectors shown out of 11,039 total revenue and governmental bond issuers across all sectors (shown in the last column).

Source: Merritt Research Services, an Investortools company. Data compiled and reported from annual comprehensive audited financial reports available on April 3, 2024.

Figure 3. Median Audit Times (in Days) by Municipal Governmental Bond Sectors, 2011-2022



Highlighting the Best

Revenue Bond Sectors

Table 3 shows the creditors and auditors with the three fastest audit times (in days) for fiscal year 2022 by each municipal credit sector for revenue bond issuers. All the top performers highlighted in Table 3 completed their audits in 90 days or faster, providing exemplary best practice models for timely reporting among municipal bond issuers.

In Table 3, the 2022 audit time top performers include 14 new issuers out of 27 total (since the life care sector is new to our analysis this year) compared to last year's top three speediest audit times. In fact, at least one new issuer is ranked among the top three fastest audit times for 2022 in every revenue bond sector reported in Table 3. Interestingly, although some of the revenue bond issuers that remained among the top three speediest from last year made marginal improvements to their audit timing this year—generally by one to three days faster—a few issuers who remained among the top three did so despite noticeably worsening their audit timeliness. It is worth noting that 70% of all revenue bond winners (excluding the newly added life care sector issuers) consistently finished their audits in 90 days or less over the past five years.

In the airports sector, the Port Authority of New York & New Jersey remained number one for audit timeliness from last year; however, their fiscal year 2022 audit time of 79 days worsened by 18 days. Both the second and third most timely audits in the airports sector—Buffalo Niagara International Airport in New York at 84 days, and Albany International Airport in New York at 87 days—are new among the top three in this sector compared to last year and produced their audits much faster than the sector's 2022 median audit time of 167 days.

Among community colleges, the top performer of Tyler Junior College District in Texas moved from third place last year to first place this year by reducing their audit time by two days. The second and third fastest audit times among community colleges—Blinn College District in Texas and Salt Lake Community College, respectively—are new to the list of top performers this year. Similarly, the top two performers in the hospitals and healthcare systems sector remained the same from last year, with the second-place issuer of the Mayo Clinic in Minnesota improving their audit time by one day. Within this sector, the third most timely audit from Mercy Health Corporation in Illinois is newly recognized as a top performer this year. Twelve percent of all hospital issuers consistently finished their audits in 90 days or less over the past five years.

This year is the first time the life care sector is included in our analysis, and the performance of this sector's audit timeliness is noteworthy. In first place, the Meadowlark Hills Retirement Community in Kansas completed their audit in 49 days, followed by Friends Homes Inc. in North Carolina submitting their audit in 53 days, and Rolling Meadows in Texas rounding out the top three performers with an audit timing of 58 days.

The top performers in both higher education sectors offer some interesting results compared to last year. Although the second-ranked private higher education institution of St Leo University Inc. in Florida dropped from first place last year, they improved their audit time from last year by two days. The other two most timely audits from the private higher education sector—Lindsey Wilson College Inc. & Affiliate in Kentucky, and Hodges University Inc. in Florida—are both newly

recognized among the top performers this year. Eighteen percent of all private universities and colleges completed their audits in 90 days or less over each of the past five years. In the public higher education sector, although the top two performers this year are the same as last year, the 2022 speediest audit time from the University of South Alabama is actually 16 days slower than last year. At the same time, the second fastest audit time for 2022 from Saginaw Valley State University in Michigan remained in second place despite improving their audit time by 8 days from last year. The third most timely audit from the Citadel Military College of South Carolina is newly recognized as a top performer this year.

In the retail electric sector, the top performer of the Sacramento Municipal Utility District in California remained from last year, yet still improved their audit timeliness by five days to complete it in 55 days. This improvement resulted in a tie with the Overton Power District #5 in Nevada, which also produced their audit in 55 days, and is a newly recognized top performer this year. The third most timely audit in the retail electric sector was completed in 61 days by the Mannford Public Works Authority in Oklahoma, which is also a new top performer this year.

Among revenue bond issuers in the toll road sector, the two speediest audit times from the Buffalo & Fort Erie Public Bridge Authority and the New York State Bridge Authority, both in New York, repeated their top rankings from last year, while also improving their audit times by one and three days, respectively. The third-place finisher of Elizabeth River Crossings OpCo LLC in Virginia is new among the top performers this year.

In the water and sewer sector, both top two performers—Tuscumbia Water & Sewer System in Alabama, completing their audit the fastest among all top performers in 28 days, and Northeast Regional Water District in North Dakota, with an audit time of 34 days—are new to the list of top performers this year. While the third fastest audit time in the water and sewer sector was among the top three performers recognized last year, the Schuylkill County Municipal Authority in Pennsylvania fell from second place to third place this year by worsening their audit time by 15 days.

The final revenue bond sector of wholesale electric also recognizes two new top performers compared to last year—Associated Electric Cooperative Inc. in Missouri in second place, and the Tennessee Valley Authority in third place. The top place finisher of Bonneville Power Administration in Oregon moved up from second place to first place this year by completing their audit in 32 days. The wholesale electric sector has the largest percentage of issuers (19%) that were able to finish their audits in 90 days or less over the past five years.

Governmental Bond Sectors

Table 4 shows the creditors and auditors with the three fastest audit times (in days) for fiscal year 2022 by each municipal credit sector for governmental bond issuers. Here, all the top performers highlighted in Table 4 (except for states and territories) completed their audits in 90 days or faster, also displaying exemplary best practice models for timely reporting among municipal bond issuers. As with the revenue bond issuers, there are several newly recognized top performers this year; however, this outcome is partially attributed to this year's data sample including cities, counties, and school districts with populations of 20,000 or greater, as opposed to our cutoff of

populations above 30,000 in prior analysis and reporting. Similarly to revenue bonds, the governmental bond sector leaders, except for states, have a consistent five-year record of producing their audits in 90 days or less.

Among cities, both Kettering, Ohio and Columbus, Ohio were recognized as top performers last year, but both moved up from second and third places last year to first and second places this year, respectively. Libertyville Village, Illinois is newly recognized this year and tied Columbus' audit timing at 90 days. Somewhat similarly, among counties, Moore County, Texas is newly recognized as a top performer this year and completed their audit the fastest within the sector at 69 days. Both second place finishers of Robertson County, Tennessee and Titus County, Texas tied with audit times of 76 days, which reflects an improvement in audit timeliness for Robertson County of two days and for Titus County of one day.

Perhaps most interesting among the governmental bond issuers, all the top performers in the dedicated tax sector are newly recognized this year compared to last year. The New York Local Government Assistance Corporation Sales Tax Bonds completed their audit in 63 days, the Kansas Department of Transportation Highway Revenue Bonds had an audit time of 77 days, and the Pennsylvania Intergovernmental Cooperation Authority Special Tax Revenue Bonds submitted their audit in 84 days—all of which are much faster than the sector's 2022 median audit time of 171 days.

Governmental bond issuers in the school districts sector also show positive trajectory with the top performer of Cadillac Area Public Schools in Michigan maintaining the number one ranking from last year by completing their audit the fastest among all governmental bond issuers in an astounding 36 days. The following two school districts—Vallivue County School District #139 in Idaho, and Mount Pleasant Independent School District in Texas—are tied with audit times of 50 days and are both newly recognized as top performers compared to last year.

Finally, it is important to note that all three top performing states and territories remained the same as last year; however, New York improved its audit timeliness by two days, while South Carolina worsened its audit timing by 17 days. States are perpetually the worst among all municipal bond issuers in their audit timeliness.

Commendable Auditors

Among the exemplary performers highlighted in Tables 3 and 4, it is also important to recognize the best auditors helping to contribute to the best practice of audit timeliness. The firm KPMG LLP is a standout, with the most creditors—five in total—listed in the top three among municipal bond sectors. CliftonLarsonAllen, LLP follows with four creditors listed among the top three speediest audit times for fiscal year 2022. These top two firms are followed by Arnold, Walker, Arnold & Co, PC, Ernst & Young, LLP, and Lumsden & McCormick, LLP, with each firm having two creditors listed among the top three performers. We commend these audit firms for their timeliness in producing audits.

Table 3. Audit Time Winners by Municipal Revenue Bond Sectors, 2022

Sectors	#1 Ranking			#2 Ranking			#3 Ranking		
	Creditor	Audit Time (Days)	Auditor Name	Creditor	Audit Time (Days)	Auditor Name	Creditor	Audit Time (Days)	Auditor Name
Airports	Port Authority of New York & New Jersey, NY	79	KPMG LLP	Buffalo Niagara International Airport, NY	84	Lumsden & McCormick, LLP	Albany International Airport, NY	87	Mengel Metzger Barr & Co. LLP
Community Colleges¹	Tyler Junior College District, TX	76	Gollob Morgan Peddy, PC	Blinn College District, TX	84	Lott, Vernon & Co, PC	Salt Lake Community College, UT	85	Utah State Auditor
Hospitals & Healthcare Systems	Kaiser Foundation Health Plan Inc & Kaiser Foundation Hospitals, CA	45	KPMG LLP	Mayo Clinic, MN	48	Ernst & Young, LLP	Mercy Health Corporation, IL	48	Wipfli, LLP
Life Care	Meadowlark Hills Retirement Community, KS	49	CliftonLarsonAllen, LLP	Friends Homes Inc, NC	53	Turlington & Company, LLP	Rolling Meadows, TX	58	Edgin, Parkman, Fleming & Fleming, PC
Private Higher Education	Lindsey Wilson College Inc & Affiliate, KY	60	Strothman & Company	St Leo University Inc, FL	62	CliftonLarsonAllen, LLP	Hodges University Inc, FL	64	CliftonLarsonAllen, LLP
Public Higher Education	University of South Alabama, AL	62	KPMG LLP	Saginaw Valley State University, MI	63	Andrews Hooper Pavlik, PLC	Citadel Military College of South Carolina, SC	78	Cherry Bekaert, LLP
Retail Electric	Sacramento Municipal Utility District, CA	55	Baker Tilly US, LLP	Overton Power District #5, NV	55	Hafen, Buckner, Everett & Graff, PC	Mannford Public Works Authority, OK	61	CBEW Professional Group, LLP
Toll Roads	Buffalo & Fort Erie Public Bridge Authority, NY	55	Lumsden & McCormick, LLP	New York State Bridge Authority, NY	65	EFPR Group, CPAs, PLLC	Elizabeth River Crossings OpCo LLC, VA	68	KPMG LLP
Water & Sewer	Tuscumbia Water & Sewer System, AL	28	Dyer & Smith, LLC	Northeast Regional Water District, ND	34	Brady, Martz & Associates, PC	Schuylkill County Municipal Authority, PA	42	Jones & Co, PC
Wholesale Electric²	Bonneville Power Administration, OR	32	PricewaterhouseCoopers, LLP	Associated Electric Cooperative Inc, MO	41	FORVIS, LLP	Tennessee Valley Authority, TN	45	Ernst & Young, LLP

Notes: All sector winners exclude issuers with less than \$10 million in long-term debt outstanding at the end of their fiscal year 2022. The light blue color shading indicates municipal bond issuers who completed timely annual audits consistently in 90 days or less over the past five years. Consistently high performers for which we do not have five years of historical data are excluded from the additional commendation signified by the light blue color shading.

¹ Includes tax supported and revenue bond issuers.

² Includes federal enterprise agencies and co-operatives.

Table 4. Audit Time Winners by Municipal Governmental Bond Sectors, 2022

Sectors	#1 Ranking			#2 Ranking			#3 Ranking		
	Creditor	Audit Time (Days)	Auditor Name	Creditor	Audit Time (Days)	Auditor Name	Creditor	Audit Time (Days)	Auditor Name
Cities¹	Kettering, OH	80	Plattensburg & Associates, Inc	Columbus, OH	90	Ohio Auditor of State	Libertyville Village, IL	90	Lauterbach & Amen, LLP
Counties²	Moore County, TX	69	Coy Barton, CPA	Robertson County, TN	76	Tennessee Comptroller of the Treasury	Titus County, TX	76	Arnold, Walker, Arnold & Co, PC
Dedicated Tax	New York Local Government Assistance Corporation Sales Tax Bonds, NY	63	BST & Co CPAs, LLP	Kansas Department of Transportation Highway Revenue Bonds, KS	77	CliftonLarsonAllen, LLP	Pennsylvania Intergovernmental Cooperation Authority Special Tax Revenue Bonds, PA	84	Maher Duessel
School Districts³	Cadillac Area Public Schools, MI	36	Baird, Cotter & Bishop, PC	Vallivue County School District #139, ID	50	Quest CPAs, PLLC	Mount Pleasant Independent School District, TX	50	Arnold, Walker, Arnold & Co, PC
States & Territories	District of Columbia	116	McConnell & Jones	New York	118	KPMG LLP	South Carolina	152	South Carolina State Auditor & CliftonLarsonAllen, LLP

Notes: The light blue color shading indicates municipal bond issuers who completed timely annual audits consistently in 90 days or less over the past five years. Consistently high performers for which we do not have five years of historical data are excluded from the additional commendation signified by the light blue color shading.

¹ Excludes cities under 20,000 population and all towns & townships.

² Excludes counties under 20,000 population.

³ Excludes school districts under 20,000 population.

Audit Timing vs. Credit Rating

Table 5 offers a correlational analysis between audit time (in days) and credit rating for fiscal year 2022, by each municipal bond sector. The analysis allows us to determine with 95% or 99% confidence whether there is a systematic relationship between audit timeliness and credit rating that is not simply the result of random chance.

In addition to showing each individual municipal credit sector separated by revenue and governmental bond issuers, the columns in Table 5 from left to right report: 1) the number of rated issuers included in the correlation analysis, which varies depending on data availability since not all issuers have credit ratings, 2) the median lowest credit rating for all rated issuers within the sector, 3) the median audit time (in days) for all issuers in the sector (as reported in Tables 1 and 2), and 4) the correlation coefficient with indicators of statistical significance for each sector.

The correlation coefficient reported in Table 5 is a statistic that measures the strength and direction of a reciprocal, linear relationship between two variables; it ranges in value from 0 (indicating no correlation) to +1 or -1 (indicating perfect positive or negative correlation). It should be noted that the credit ratings are reverse coded, such that a value of 1 indicates the best or AAA credit rating, with increasing numerical values indicating reductions in credit ratings. This was done to match the audit time coding, with lower values indicating better or improved audit timeliness. As such, the positive sign on the correlation coefficients in Table 5 tell us that higher credit ratings are associated with speedier audit times; the negative correlation coefficients indicate the opposite relationship, but neither of these are statistically significant. In addition, the values of the correlation coefficients reported in Table 5 provide an indication of the strength of association between credit rating and audit timeliness, with values closer to one reflecting a stronger relationship.

According to the results shown in Table 5, there is a clear connection between credit rating and audit timeliness for municipal bond issuers in nearly all sectors. Revenue bond issuers in the airports, hospitals and healthcare systems, private higher education, public higher education, retail electric, and the water and sewer sectors that have more timely audits also systematically have higher credit ratings. Similarly, all governmental bond issuers with more timely audits also systematically have higher credit ratings. Interestingly, however, based upon the values of the correlation coefficients reported in Table 5, while the relationship between audit timeliness and credit rating is statistically systematic, it is not particularly strong. Specifically, the largest correlation coefficient reported in Table 5 is 0.3263, which is for states and territories. Traditional interpretations of correlation coefficients below a value of 0.39 are considered weak associations. So, although we can say that there is a systematic relationship between audit timing and credit rating, there are undoubtedly many other important factors influencing credit ratings.

Table 5. Correlational Analysis of Audit Time (in Days) vs. Credit Rating, 2022

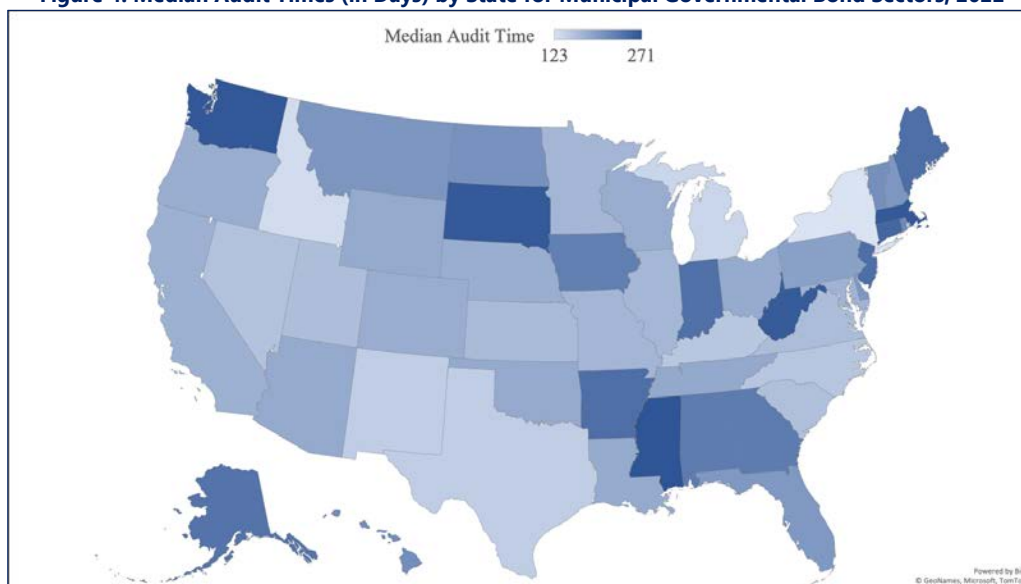
	Sector	Number of Rated Issuers	Median Lowest Credit Rating	Median Audit Time (in Days)	Correlation Coefficient
Revenue Bond Sectors	Airports	84	A	167	0.3148***
	Community Colleges	273	AA	159	-0.0450
	Hospitals & Healthcare Systems	479	A	118	0.2043***
	Life Care	173	BBB	117	0.1427
	Private Higher Education	418	BBB	124	0.2057***
	Public Higher Education	225	A	153	0.1970***
	Retail Electric	241	A	153	0.2437***
	Toll Roads	64	A	133	-0.0842
	Water & Sewer	1,334	AA	172	0.1753***
	Wholesale Electric	86	A	104	0.0295
Governmental Bond Sectors	Cities	1,436	AA	182	0.2481***
	Counties	794	AA	201	0.1947***
	Dedicated Tax	383	AA	171	0.1760***
	School Districts	2,365	AA	167	0.0926***
	States & Territories	41	AA	197	0.3263**

Notes: **p < 0.05; ***p < 0.01

Geographical Illustration

As a final contribution to this year's analysis and reporting on audit timing among municipal bond sectors, Figure 4 provide a geographical illustration of median audit times (in days) for governmental bond sectors, including all city, county, dedicated tax, school district, and state/territory issuers, within each U.S. state. The lightest blue shading indicates states with issuers that are collectively most timely in completing their audits. The minimum median audit time of 123 days represents the state of New York. Following New York's lead on audit timeliness, Idaho comes in second with a median audit time of 130 days, followed by Michigan at 131 days. The darkest shading indicates the collectively least timely audits with a maximum or worst median audit time of 271 days in the state of Mississippi. Slightly better than Mississippi are the states of Washington at 267 days and South Dakota at 266 days. Surprisingly, there is no discerning regional or neighbor-mimicking pattern emerging from the data illustration.

Figure 4. Median Audit Times (in Days) by State for Municipal Governmental Bond Sectors, 2022



The **Government Finance Research Center** at the University of Illinois Chicago shapes and informs public policy and scholarly discourse on government and public finance by identifying, planning, and executing research; providing reports and informed analyses; delivering educational opportunities and technical training; and offering inclusive venues to convene national and local discussions on fiscal and governance issues. Contact GFRC Director Deborah A. Carroll at deborahc@uic.edu.

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