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The Good, The Bad, and the Super Slow: Examining the Timeliness of Municipal Bond Audits

Audit Year 2023

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Policy Bite and Main Findings

- The median audit time for all municipal bond sectors has increased 10.6% over time, from 151 days in 2012 to 167 days in 2023, worsening by 16 days.
- Issuers in the governmental bond sectors have generally slower median audit times compared to issuers in the revenue bond sectors.
- Although 2023 was a peak year for the accountant shortage, audit times for all municipal bond sectors slightly improved between 2022 and 2023.
- Issuers that have yet to complete their 2023 audits have significantly slower audit times for 2022 and 2021, suggesting a sustained pattern of failing to complete audits in a timely manner.
- The percentages of issuers considered outliers due to excessively long delays in completing their audits generally range from 3% to 5% among all municipal bond sectors.

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. For this reason, auditing serves a more important and broader purpose than simply revealing potential fraud or malfeasance.

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 or longer—to complete their audits.

In the interest of recognizing and encouraging timely transparency, 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 since 2007. In 2022, Merritt Research Services partnered with the Government Finance Research Center at the University of Illinois Chicago to continue providing this important annual reporting and analysis.

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 recognition of best performers all municipal bond issuers with financial statements that do not comply with Generally Accepted Accounting Principles (GAAP). Finally, we group credit sectors into those that issue revenue bonds versus governmental bonds, while recognizing that revenue bonds also apply to governmental issuers in our analysis.

In this year's report, we first offer an overview of audit time trends since 2012. We then recognize the timeliest audits for the 2023 fiscal year, grouped by municipal credit sector, from nearly 12,000 municipal bond audits in the Merritt Research Services database found in CreditScope.[1] Equally important as highlighting the best performers, we also analyze median audit times for fiscal years 2022 and 2021, emphasizing issuers who failed to complete their 2023 audits by May 5, 2025, to examine persistently slow audit times that repeatedly extend well beyond the fiscal year-end. Since several of these persistently slow audit times extend beyond a full year, we also investigate the prevalence of excessively slow issuers that are considered outliers in timeliness.

We use this year's report to emphasize persistently and excessively slow audit times for issuers who have yet to submit their 2023 audits, so these very late filers are not overlooked. This spotlight on poor performers is necessary, as completing timely audits is of utmost importance for stakeholder and investor decision making, which requires assessment of an organization's financial position or fiscal health and its likely future direction, which can only be relayed through its audit and auditor's opinion.

[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 15,000 compared to the previous minimum population threshold of 20,000.

By the Numbers 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 2012–2023, with these historical trends also illustrated in Figures 1 and 2. For the first time last year, we were 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 and maintained the same median audit time of 117 days for 2023. However, due to the lack of historical data for the full time period of analysis, it is excluded from Figure 1.

According to Table 1, the median audit time for all sectors combined has increased 10.6% over time, from 151 days in 2012 to 167 days in 2023, worsening by 16 days. During this time, there were increases in the median audit times for issuers in every revenue bond sector, although each sector slightly improved its median audit times between 2022 and 2023 despite the accountant shortage. Community colleges and water and sewer issuers increased their median audit times the most, by nearly 14% or 19 days and nearly 12% or 18 days, respectively, between 2012 and 2023. Following these two sectors, issuers in the airports, public higher education, and private higher education sectors all increased their median audit times by roughly 10% or between 11 and 16 days during the 2012–2023 time period. The wholesale electric and toll road sectors worsened their median audit times the least, by 2% or 2 days and by 4.1% or 5 days, respectively, between 2012 and 2023.

Table 1. Median Audit Times (in Days) by Municipal Revenue Bond Sectors, 2012-2023

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
2012	110	--	138	113	138	150	142	123	153	100	151
2013	112	--	144	114	136	150	140	123	155	102	150
2014	112	--	140	114	130	144	139	123	154	100	149
2015	112	--	146	115	147	160	148	128	161	105	156
2016	111	--	141	116	144	154	145	125	161	102	156
2017	111	--	143	115	136	155	145	120	163	99	156
2018	114	--	149	116	142	158	150	123	164	100	159
2019	115	--	149	118	142	159	149	121	165	94	159
2020	118	--	162	121	148	162	153	135	168	97	169
2021	118	--	160	121	154	163	152	127	169	101	169
2022	118	117	159	125	154	167	159	133	173	104	169
2023	117	117	157	124	152	166	152	128	171	102	167

Note: The number of audits varies from year to year. Median audit times for 2023 reflect 4,766 municipal revenue bond audits across the individual sectors shown out of 11,838 total revenue and governmental bond audits 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 May 5, 2025.

Figure 1 shows that revenue bond issuers in all 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 fastest of 110 days for hospitals and healthcare systems in 2012 to the slowest of 162 days for community colleges in 2020. However, all trendlines in Figure 1 show a positive trajectory, indicating worsening audit times for all these sectors over the time period.

Figure 1. Median Audit Times (in Days) by Municipal Revenue Bond Health and Higher Education Sectors, 2012-2023

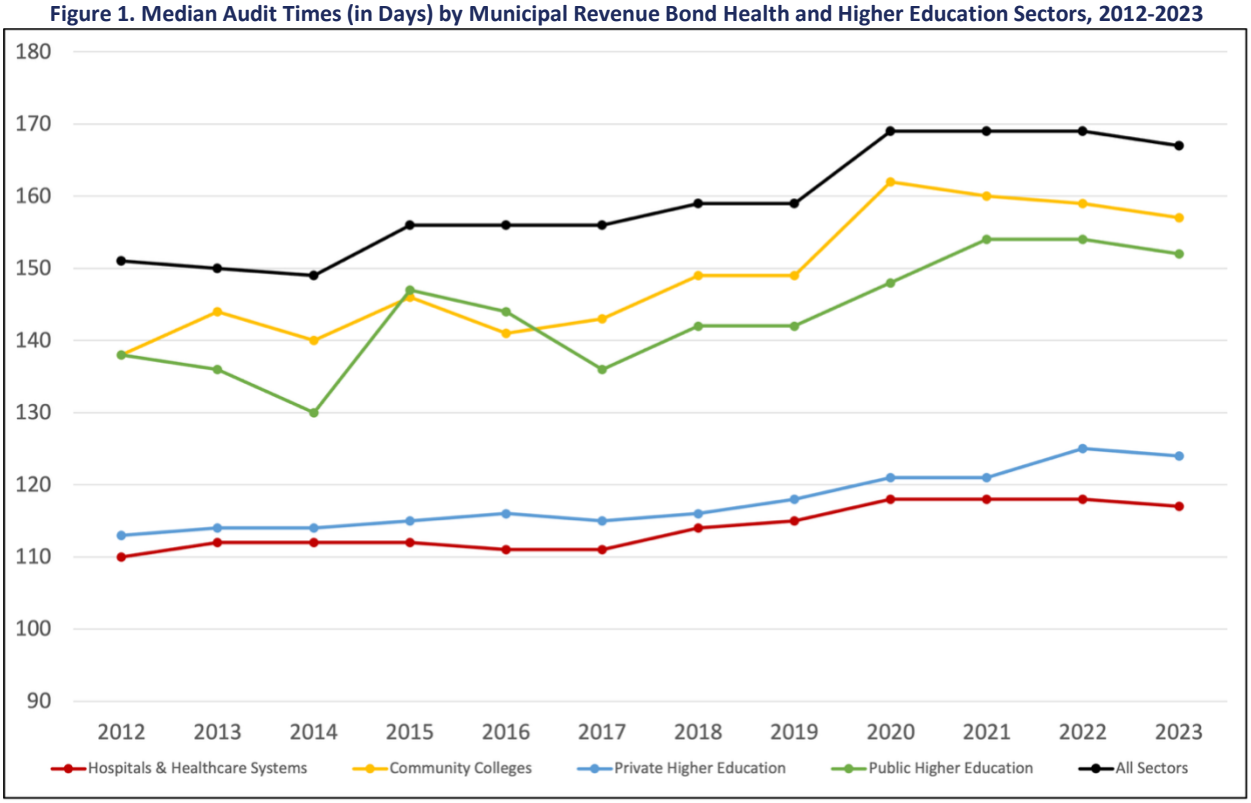
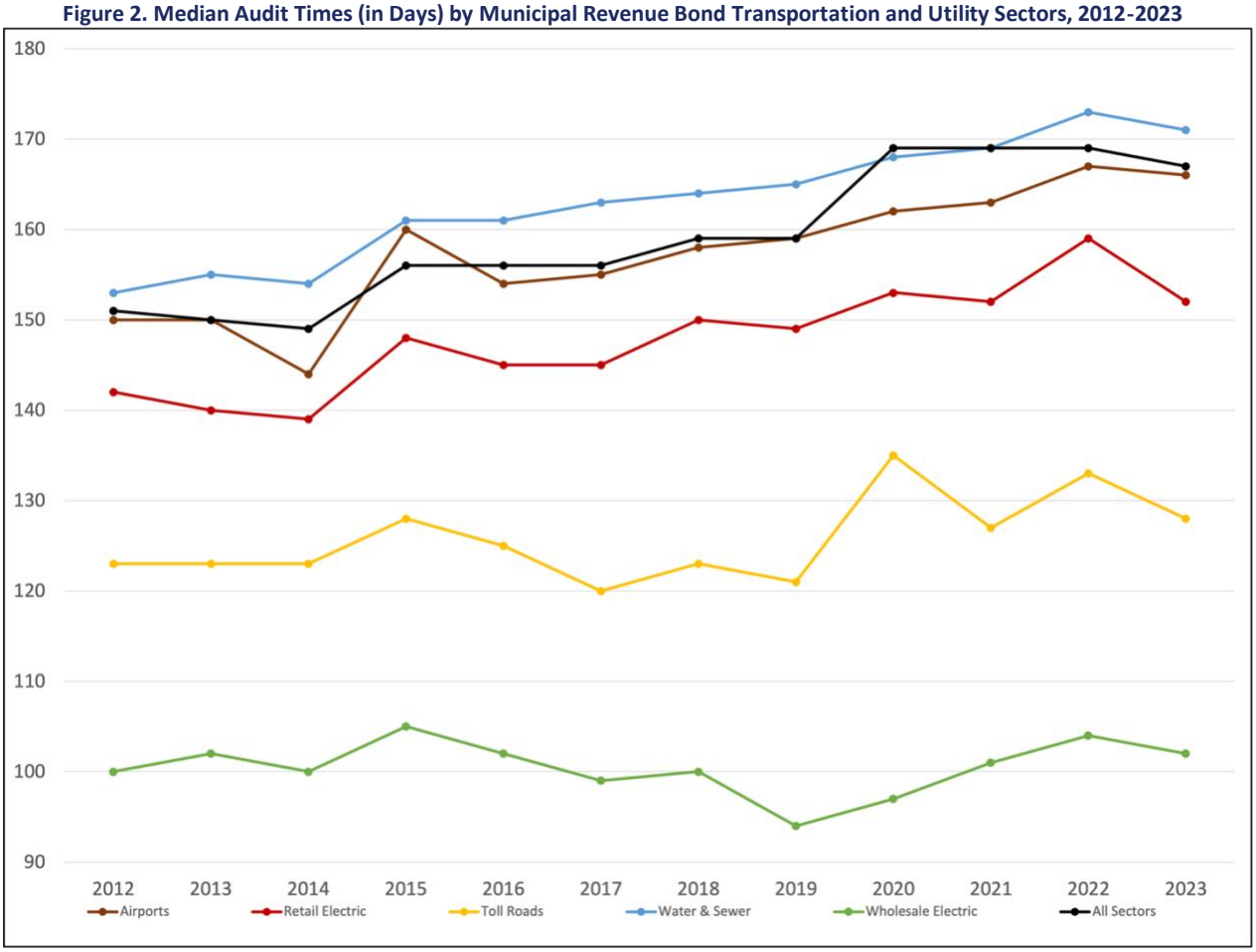


Figure 2 tells a slightly different story about revenue bond issuers in the transportation and utility sectors. Issuers in the retail electric, toll roads, and wholesale electric sectors maintain median audit times that are faster than all sectors combined (including both revenue and governmental bond 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 fastest of 94 days in the wholesale electric sector in 2019 to the slowest of 173 days for the water and sewer sector in 2022. Similar to the health and higher education sectors, all the trendlines in Figure 2 show an upward trajectory except for the wholesale electric sector, indicating worsening audit times for these transportation and utility sectors over the time period.

Figure 2. Median Audit Times (in Days) by Municipal Revenue Bond Transportation and Utility Sectors, 2012-2023



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 2012–2023, with the historical trends illustrated in Figure 3. As can be seen, issuers in the governmental bond sectors generally maintain much slower and more volatile median audit times, with a worsening of median audit times for every governmental bond sector between 2012 and 2023.

Table 2. Median Audit Times (in Days) by Municipal Governmental Bond Sectors, 2012-2023

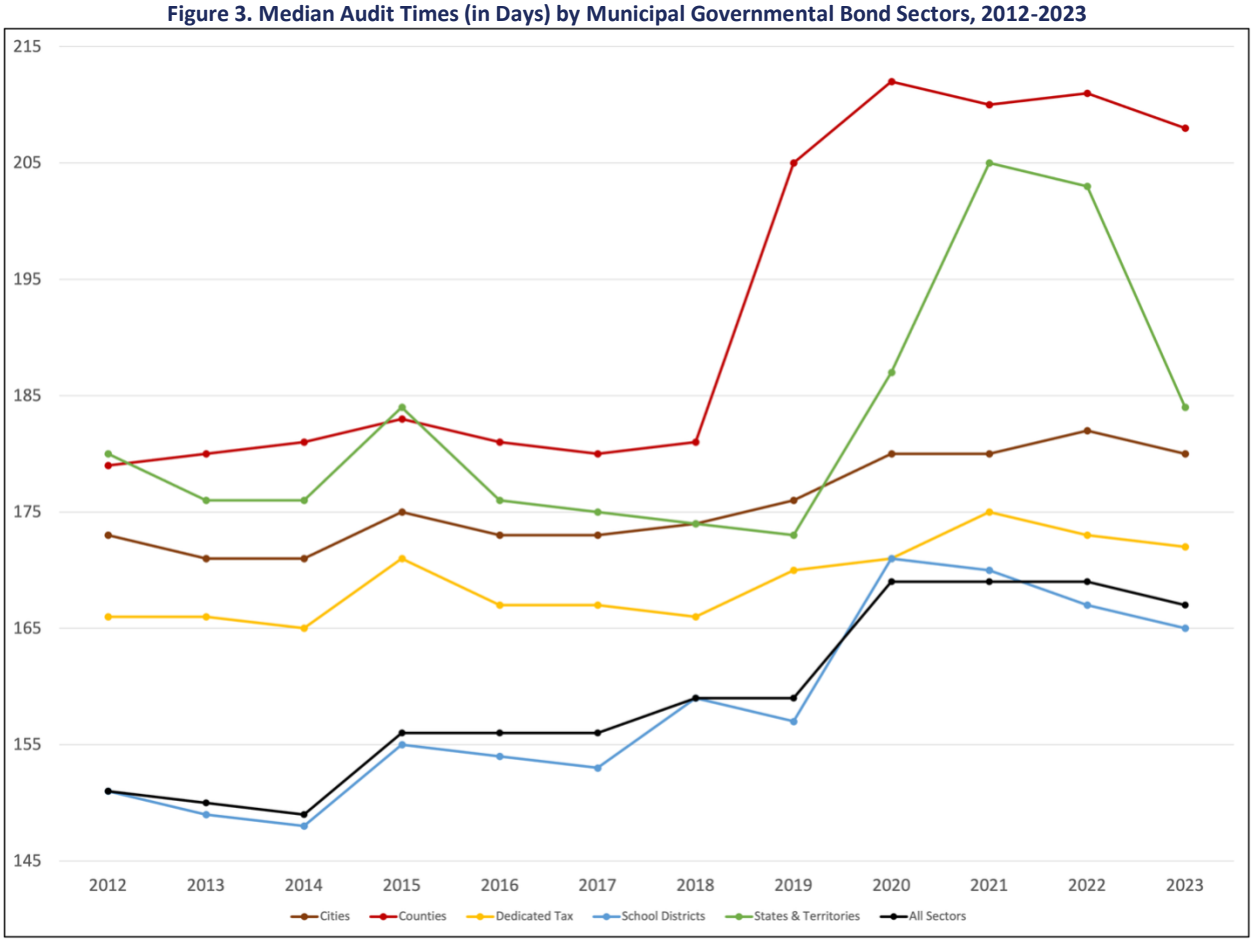
Years	Cities	Counties	Dedicated Tax	School Districts	States & Territories	All Sectors
2012	173	179	166	151	180	151
2013	171	180	166	149	176	150
2014	171	181	165	148	176	149
2015	175	183	171	155	184	156
2016	173	181	167	154	176	156
2017	173	180	167	153	175	156
2018	174	181	166	159	174	159
2019	176	205	170	157	173	159
2020	180	212	171	171	187	169
2021	180	210	175	170	205	169
2022	182	211	173	167	203	169
2023	180	208	172	165	184	167

Note: The number of audits varies from year to year. Median audit times for 2023 reflect 7,072 municipal governmental bond audits across the individual sectors shown out of 11,838 total revenue and governmental bond audits 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 May 5, 2025.

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 fastest of 165 days for the dedicated tax sector in 2014 to the slowest of 212 days by counties in 2020. Although school districts had slower median audit times during and immediately after the COVID-19 pandemic in 2020 and 2021, the sector's median audit time is either at or below the median for all sectors combined (including both revenue and governmental bond issuers) for every other year.

Again, however, it is important to note that median audit times for every single governmental bond sector worsened between 2012 and 2023, with counties, states, and territories performing the worst. Counties worsened their median audit time by 16.2% or 29 days between 2012 and 2023, while states and territories slowed their median audit time by 2.2% or 4 days. Although school districts have improved their median audit time since the pandemic, the sector has still increased its median audit time second most among governmental bond issuers, by 9.3% or 14 days during the whole time period. This is an important trend to highlight because school districts represent nearly half (3,460 issuers or 48.9%) of the total number of issuers in our dataset.

Figure 3. Median Audit Times (in Days) by Municipal Governmental Bond Sectors, 2012-2023



Acknowledging the Good

Revenue Bond Sectors

Table 3 shows the creditors and auditors with the three fastest audit times (in days) for fiscal year 2023 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 2023 audit time top performers include 15 new issuers out of 30 total, compared to last year. In fact, at least one new issuer is ranked among the top three fastest audit times for 2023 in every revenue bond sector, except for hospitals and healthcare systems, in which all three top performers are repeats from last year. We commend the Kaiser Foundation Health Plan Inc. & Kaiser Foundation Hospitals in California, Mercy Health Corporation in Illinois, and the Mayo Clinic in Minnesota for their consistently timely audits, which were completed in between 45 and 47 days, respectively.

In the airports sector, the Port Authority of New York & New Jersey remained number one for audit timeliness from last year and improved upon their fiscal year 2022 audit time of 79 days to 66 days for 2023. Both the second and third most timely audits in the airports sector—Albany International Airport in New York at 78 days and Asheville Regional Airport in North Carolina at 80 days—produced their audits much faster than the sector's 2023 median audit time of 166 days.

Among community colleges, the Victoria County Junior College District in Texas remained from last year and tied for second place with newcomer Salt Lake Community College in Utah. The top performer of Greenville Technical College in South Carolina is also new to the list of top performers this year. The audit times for these top performers range from 77 to 89 days, compared to a median audit time in 2023 of 157 days for the community colleges sector.

This year is the second time the life care sector is included in our analysis, and the performance of this sector's audit timeliness is noteworthy. In first place, Rolling Meadows in Texas was the third fastest to complete their audit last year and improved by eight days to reach the top performing spot this year. Although the Meadowlark Hills Retirement Community in Kansas fell from first to second place since last year by worsening its audit time by ten days, it still completed its 2023 audit in 59 days to remain among our top three performers. The Belvedere SLF LLC in Indiana is new among the top three life care sector performers this year, with an audit time of 65 days.

In both higher education sectors, half of the top performers are new this year compared to last year. The second-ranked private higher education institution of St. Leo University Inc. in Florida held steady from last year despite worsening its audit time by five days. The first- and third-most timely audits from the private higher education sector—Meredith College in North Carolina and Campbellsville University in Kentucky—are both newly recognized among the top performers this year. In the public higher education sector, the top two performers this year are the same as last year but switched places, while the third-best audit time from Utah Tech University in Utah is new to our list 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 its audit timeliness by one day to complete its audit in 54 days. This improvement resulted in a tie with the Shawano Municipal Utilities - Electric Fund in

Table 3. Audit Time Winners by Municipal Revenue Bond Sectors, 2023

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	66	KPMG LLP	Albany International Airport, NY	78	Mengel Metzger Barr & Co. LLP	Asheville Regional Airport, NC	80	Martin Starnes & Associates, CPAs, PA
Community Colleges[1]	Greenville Technical College, SC	77	Mauldin & Jenkins, LLC	Salt Lake Community College, UT	89	Utah State Auditor	Victoria County Junior College District, TX	89	Cascos & Associates, PC
Hospitals & Healthcare Systems	Kaiser Foundation Health Plan Inc & Kaiser Foundation Hospitals, CA	45	KPMG LLP	Mercy Health Corporation, IL	46	Wipfli, LLP	Mayo Clinic, MN	47	Ernst & Young, LLP
Life Care	Rolling Meadows, TX	46	Edgin, Parkman, Fleming & Fleming, PC	Meadowlark Hills Retirement Community, KS	59	CliftonLarsonAllen, LLP	Belvedere SLF LLC, IN	65	Cohn Reznick, LLP
Private Higher Education	Meredith College, NC	62	Cherry Bekaert, LLP	St Leo University Inc, FL	67	CliftonLarsonAllen, LLP	Campbellsville University, KY	68	FORVIS, LLP
Public Higher Education	Saginaw Valley State University, MI	69	Andrews Hooper Pavlik, PLC	University of South Alabama, AL	81	KPMG LLP	Utah Tech University, UT	83	Utah State Auditor
Retail Electric	Sacramento Municipal Utility District, CA	54	Baker Tilly US, LLP	Shawano Municipal Utilities - Electric Fund, WI	54	KerberRose, SC	Salt River Project, AZ	61	PricewaterhouseCoopers, LLP
Toll Roads	Buffalo & Fort Erie Public Bridge Authority, NY	54	Lumsden & McCormick, LLP	Kiewit Meridiam Partners LLC: Central 70 Project, CO	57	Crowe, LLP	New York State Bridge Authority, NY	67	EFPR Group, CPAs, PLLC
Water & Sewer	Warrior River Water Authority, AL	26	Phillip Morgan & Company, PC	Tuscumbia Water & Sewer System, AL	31	Dyer & Smith, LLC	Erie Sewer Authority, PA	32	Buseck, Barger, Bleil & Co, Inc
Wholesale Electric[2]	Bonneville Power Administration, OR	32	PricewaterhouseCoopers, LLP	Square Butte Electric Cooperative, ND	40	Brady, Martz & Associates, PC	Minnkota Power Cooperative Inc, ND	40	Brady, Martz & Associates, PC

Note: All sector winners exclude issuers with less than $10 million in long-term debt outstanding at the end of their fiscal year 2023.

[1] Includes tax-supported and revenue bond issuers.

[2] Includes federal enterprise agencies and cooperatives.

Wisconsin, which also produced its audit in 54 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 Salt River Project in Arizona, which is also a newly recognized top performer this year.

Among revenue bond issuers in the toll road sector, the speediest audit time from the Buffalo & Fort Erie Public Bridge Authority in New York repeated their top ranking from last year. The third-place performer this year was the second-place performer last year, maintaining its standing among the top three fastest audit times. This year's second-place finisher, Kiewit Meridiam Partners LLC: Central 70 Project in Colorado, is new among the top performers this year.

In the water and sewer sector, the second-place performer of Tuscumbia Water & Sewer System in Alabama was the fastest finisher last year and only slowed its audit time by three days this year to complete its audit in 31 days. The first and second place performers of the Warrior River Water Authority in Alabama and the Erie Sewer Authority in Pennsylvania are newly recognized this year by completing their audit times in 26 and 32 days, respectively.

The final revenue bond sector of wholesale electric also recognizes two new top performers compared to last year. Square Butte Electric Cooperative and Minnkota Power Cooperative Inc., both in North Dakota, tied for second place. The top place finisher of Bonneville Power Administration in Oregon remained in first place again this year by completing its audit in 32 days.

Governmental Bond Sectors

Table 4 shows the creditors and auditors with the three fastest audit times (in days) for fiscal year 2023 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 15,000 or greater, as opposed to our cutoff populations above 20,000 or 30,000 in prior analyses and reports.

Among cities, Kettering, Ohio remained the top performer from last year by completing its audit in 85 days despite switching from a private auditing firm to the Ohio Auditor of State. Libertyville Village, Illinois and Milpitas, California are newly recognized this year and tied for second place at 87 days to complete their audits. Also noteworthy among cities are Columbus, Ohio and Sioux Falls, South Dakota, which, despite having much larger populations, are typically among the three best performers and only dropped to fourth and fifth places, respectively, by completing their audits one and two days slower than this year's top three. These two cities repeatedly maintain best practices by showing that even large issuers can be timely in completing their audits.

Among counties, the top performer of Henderson County, Tennessee and the third-place finisher of Gray County, Texas are both newly recognized this year for completing their audits in 61 and 74 days, respectively. Like our top-performing city and county this year, the second-place county finisher of Robertson County, Tennessee, was completed in only 67 days by the state's auditor.

Two of the three top performers in the dedicated tax sector are also newly recognized this year compared to last year. The first-place finisher of South Carolina Transportation Infrastructure Bank

Table 4. Audit Time Winners by Municipal Governmental Bond Sectors, 2023

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
Cities[1]	Kettering, OH	85	Ohio Auditor of State	Libertyville Village, IL	87	Lauterbach & Amen, LLP	Milpitas, CA	87	Maze & Associates
Counties[2]	Henderson County, TN	61	Tennessee Comptroller of the Treasury	Robertson County, TN	67	Tennessee Comptroller of the Treasury	Gray County, TX	74	Doshier, Pickens & Francis, LLC
Dedicated Tax	South Carolina Transportation Infrastructure Bank Revenue Bonds, SC	76	Mauldin & Jenkins, LLC	Kansas Department of Transportation Highway Revenue Bonds, KS	77	CliftonLarsonAllen, LLP	Erie County Fiscal Stability Authority Sales Tax Bonds, NY	82	Lumsden & McCormick, LLP
School Districts[3]	Quinlan Independent School District, TX	32	Rutherford, Taylor & Company, PC	Hempstead Union Free School District, NY	43	EFPR Group, CPAs, PLLC	Vallivue County School District #139, ID & Middleton School District #134, ID	49	Quest CPAs, PLLC
States & Territories	District of Columbia	116	McConnell & Jones, LLP	New York	118	KPMG LLP	Michigan	138	Michigan Auditor General

[1] Excludes cities under 15,000 population and all towns, townships, and boroughs.

[2] Excludes counties under 15,000 population.

[3] Excludes school districts under 15,000 population.

Revenue Bonds in South Carolina completed its audit in 76 days, while the third-place finisher of Erie County Fiscal Stability Authority Sales Tax Bonds in New York had an audit time of 82 days. The Kansas Department of Transportation Highway Revenue Bonds in Kansas remained in second place this year, with an audit time of 77 days.

Governmental bond issuers in the school districts sector also have new top performers in both first and second place, with Quinlan Independent School District in Texas and Hempstead Union Free School District in New York completing their audits in 32 and 43 days, respectively. The third-best performer of Vallivue County School District #139 in Idaho was in second place last year but still improved its audit time by one day despite the slightly lower ranking this year. Tied for third place with an audit time of 49 days is Middleton School District #134, which is also located in Idaho.

Finally, among the states and territories, both the District of Columbia and New York were among the top performers last year, while the third-place finisher, Michigan, is newly recognized this year.

Commendable Auditors

Among the exemplary performers highlighted in Tables 3 and 4, it is also important to recognize the auditors who help contribute to the best practice of audit timeliness. The firms KPMG LLP and CliftonLarsonAllen, LLP are standouts, with the most creditors—three each in total—listed as top performers among all municipal bond sectors. We also see six of the top performers for fiscal year 2023 using state auditors, including from Utah, Tennessee, Ohio, and Michigan. Even though 2023 was a peak year for the accountant shortage, it is noteworthy that audit times for all sectors improved between 2022 and 2023. We commend these auditors for their timeliness in completing these audits, given their broad importance and usefulness for financial and investment decision-making by stakeholders.

Highlighting the Bad

Table 5 offers difference-of-means testing of the 2022 and 2021 audit times for those issuers that completed their fiscal year 2023 audit by May 5, 2025 versus those with their 2023 audits still outstanding. Difference-of-means testing is a statistical method utilizing a t-test that allows us to determine if there is a statistically significant difference in the average values of audit times between the two groups of issuers that have completed their 2023 audit versus those that have not. The primary goal of this test is to assess (with 90%, 95%, or 99% confidence) whether the differences in audit times we observe in our sample are due to real differences in the population or if such observed differences are simply due to random chance. By comparing and testing differences in audit times for prior years between issuers with completed versus incomplete 2023 audits, we are able to examine the prevalence of perpetually slow audit times.

Table 5. Difference of Means Testing 2022 and 2021
Median Audit Time (in Days) of Issuers with Completed vs. Incomplete Audits for 2023

Sector		Median Audit Time 2022			Median Audit Time 2021		
		2023 Audit Completed	2023 Audit Incomplete	|t|	2023 Audit Completed	2023 Audit Incomplete	|t|
Revenue Bond Sectors	Airports	167	371	1.9345*	163	326	1.6872*
	Community Colleges	159	163	1.1470	160	172	0.0607
	Hospitals & Healthcare Systems	118	144	3.3530***	118	125	4.0690***
	Life Care	117	152	3.6490***	--	--	--
	Private Higher Education	124	184	3.7772***	120	172	3.0087***
	Public Higher Education	152	320	2.1247**	153	230	1.6010*
	Retail Electric	157	169	1.4688*	148	208	2.8166***
	Toll Roads	133	119	--	127	119	--
	Water & Sewer	173	274	5.9026***	168	181	4.3116***
	Wholesale Electric	104	211	1.9957*	101	116	1.6559*
Governmental Bond Sectors	Cities	181	343	7.5863***	180	350	7.8972***
	Counties	208	498	11.0370***	207	424	10.5072***
	Dedicated Tax	168	235	3.2576***	171	180	2.1582**
	School Districts	167	259	7.0115***	170	285	4.8173***
	States & Territories	184	559	4.4321**	184	709	3.1689**

Notes: *p < 0.10; **p < 0.05; ***p < 0.01. A total of 11,838 audits were completed for 2023 compared to 2,354 audits for 2023 still outstanding as of May 5, 2025. Due to large differences in the numbers of observations between issuers who completed their 2023 audit and those still outstanding, the t-tests were performed using Welch's approximation. Test statistics for the toll roads sector could not be calculated due to only one issuer with an outstanding 2023 audit. The life care sector was first included in our analysis in 2022, so median audit times for 2021 are unavailable.

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 2022 median audit time (in days) for issuers who already completed their 2023 audit, 2) the 2022 median audit time (in days) for issuers who have yet to complete their 2023 audit, 3) the corresponding t-test statistic with indicators of statistical significance used to assess the differences in 2022 median audit times between the two groups for each sector. These three columns are then repeated using median audit times for fiscal year 2021. It should be noted that the life care sector could not be analyzed for 2021 because fiscal year 2022 is the first time the sector was included in our analysis. In addition, there was only one observation in the toll roads sector with an incomplete 2023 audit, so the test statistic could not be calculated for that sector.

According to the results in Table 5, there are statistically significant differences in median audit times for fiscal years 2022 and 2021 for every single sector except for community colleges. For community colleges that have completed their fiscal year 2023 audit, their median audit time for the 2022 fiscal year is 159 days, compared to 163 days for issuers that have yet to complete their 2023 audit. The median audit time for community colleges in 2021 is 160 days for those issuers who have completed their 2023 audit, compared to 172 days for those that have not. Both tests fail to reach statistical significance, indicating that the differences in 2022 and 2021 audit times for those issuers that have already completed their 2023 audits are not significantly different from those with 2023 audits still outstanding. Overall, however, the findings in Table 5 suggest that slow audit times for nearly every municipal bond sector reflect a pattern of repeatedly slow audit times that are not due to random chance.

As illustrated in Figure 4 (for the revenue bond sectors) and 5 (for the governmental bond sectors), there are stark differences in the 2022 median audit times for those issuers who have completed their 2023 audit versus those that have yet to do so. For all municipal bond sectors (except for community colleges and toll roads that could not be tested), there are statistically significant differences in their median audit times that are not due to random chance. Issuers that have yet to complete their 2023 audits have significantly slower audit times for 2022 and 2021, suggesting a sustained pattern of failing to complete audits in a timely manner.

Figure 4. 2022 Median Audit Time (in Days) of Issuers with Completed vs. Incomplete Audits for 2023 by Revenue Bond Sector

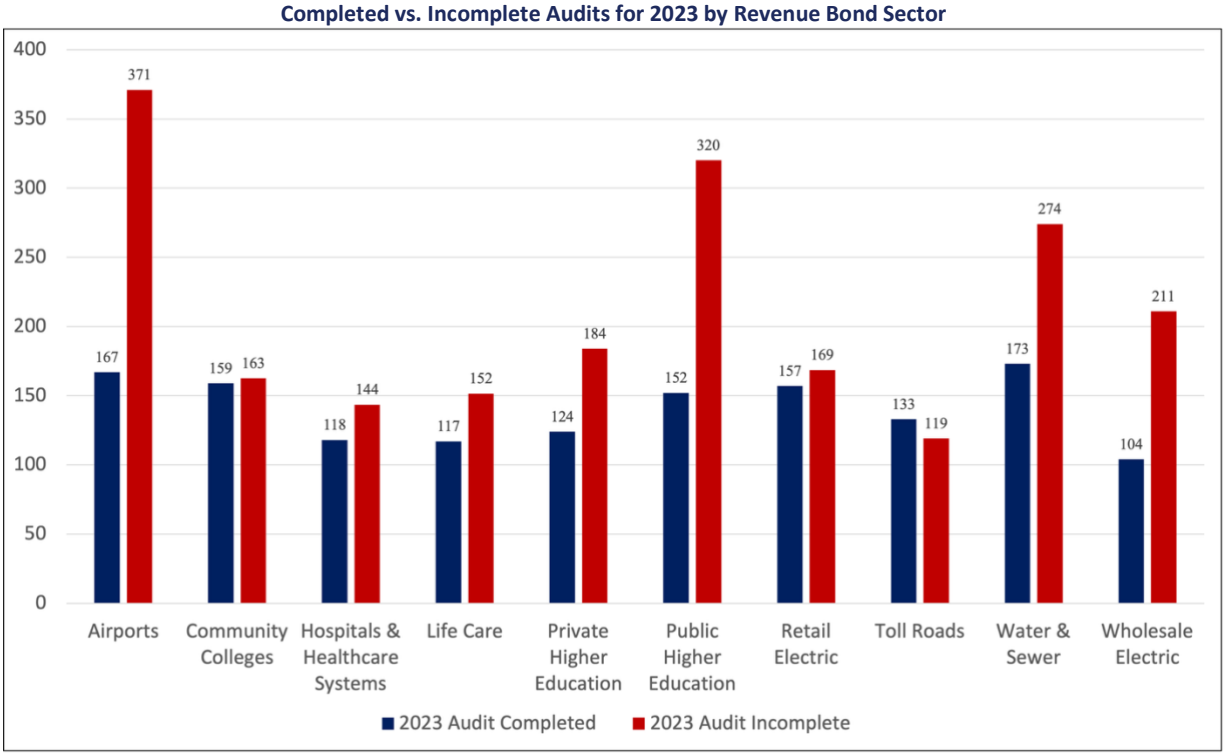
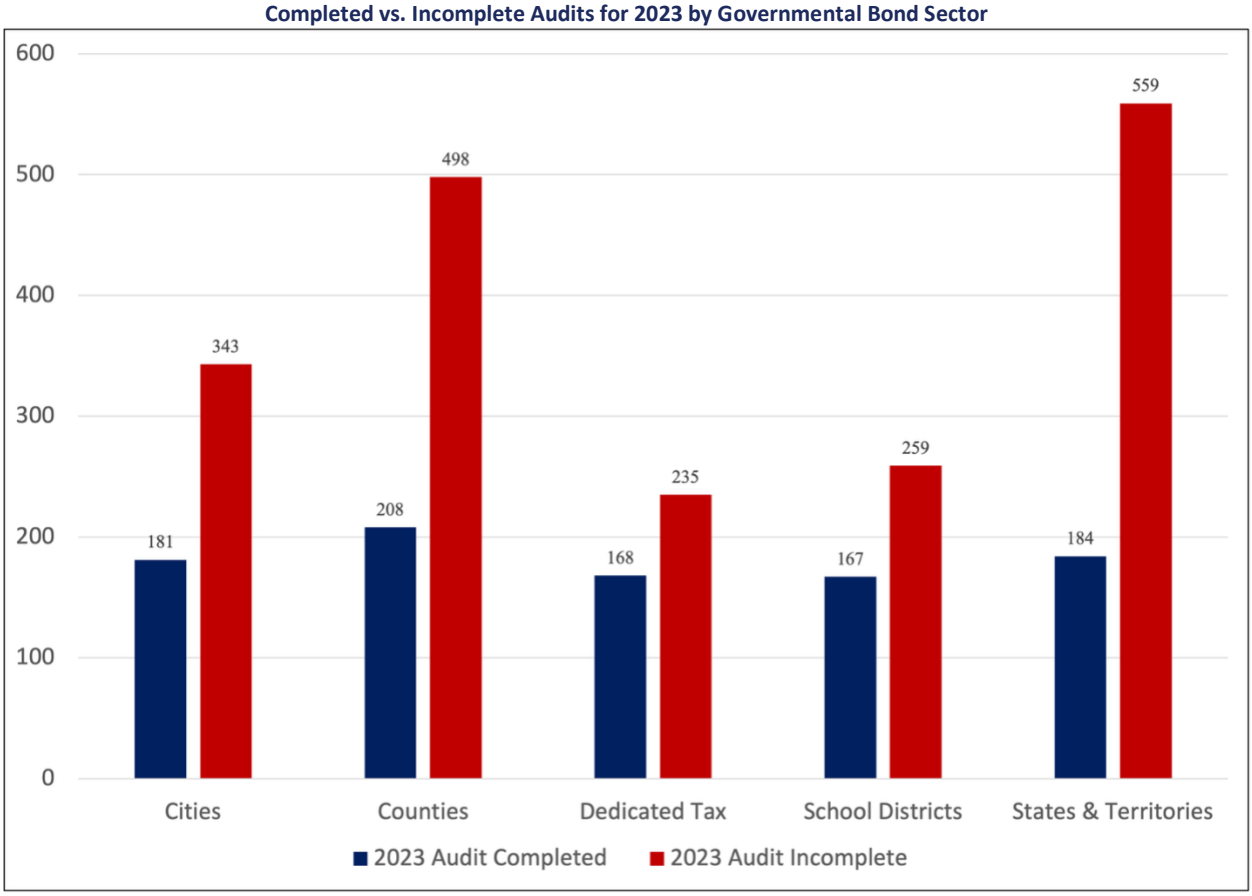


Figure 5. 2022 Median Audit Time (in Days) of Issuers with Completed vs. Incomplete Audits for 2023 by Governmental Bond Sector



States and territories perform the worst, with median audit times greater than one year (559 days in 2022) and even nearing two years (709 days in 2021) for those issuers that have yet to complete their 2023 audits. For fiscal year 2022, Nevada and Puerto Rico took 559 and 645 days, respectively, to complete their audits, which was actually an improvement for Puerto Rico from the prior year. In 2021, Puerto Rico took 709 days to complete its audit, with the U.S. Virgin Islands taking 869 days and the Northern Mariana Islands taking a whopping 1,050 days.

Counties perform second worst, with 2022 and 2021 median audit times extending beyond one year (498 and 424 days, respectively) for both years. Cities round out the three worst median audit times, at 343 days for 2022 and 350 days for 2021, among issuers with incomplete 2023 audits. Taken together, these findings suggest sustained prevalence of slow audit times for most of the issuers in the governmental bond sectors due to repeatedly failing to complete their audits in a timely manner.

Although the remaining issuers in the revenue bond sectors perform comparatively better than the governmental bond sector issuers, several of the sectors display median audit times that exceed 300 days for the group of issuers that have yet to complete their 2023 audit. In the airports sector, the median audit time is 371 days for 2022 and 326 days for 2021. While the median audit time for the public higher education sector is 230 days for those issuers with incomplete 2023 audits, the median audit time for 2022 is much worse at 320 days.

Reproaching the Super Slow

As a final contribution to this year's analysis and reporting on audit timing among municipal bond sectors, Table 6 examines the number of audit times considered to be outliers for each sector in fiscal years 2022 and 2021. Outliers are defined as audits that were completed in a number of days that exceeds two standard deviations above the average audit time for the sector each year. For each sector and each year, the columns in Table 6 report: 1) the total number of audits completed, 2) the outlier audit time (in days) calculated as two standard deviations above the mean audit time, 3) the number of audits that were completed in a number of days that exceeds the outlier audit time, and 4) the percent of total audits completed that are considered outliers.

As can be seen from Table 6, the percentage of issuers considered outliers due to very long delays in completing their audits generally ranges from 3% to 5% among all the sectors, which is a relatively low but nontrivial amount of excessively slow audit times. There are a few standouts worthy of mention. First, 8.54% of issuers in the private higher education sector were extremely slow in completing their 2022 audits, with a median audit time of 250 days. This is particularly concerning since private higher education is considered a higher-risk sector for investors, thereby necessitating more timely audits.

Table 6. Numbers and Percentages of Outlier Audit Times for Fiscal Years 2022 and 2023

	Sector	2022 Outlier Audits				2021 Outlier Audits			
		Total Number of Audits	Outlier Audit Time (in Days)	Number of Outlier Audits	Percent of Total	Total Audits	Outlier Audit Time (in Days)	Number of Outliers	Percent of Total
Revenue Bond Sectors	Airports	149	342	6	4.03%	149	321	7	4.70%
	Community Colleges	315	308	11	3.49%	314	339	17	5.41%
	Hospitals & Healthcare Systems	865	277	31	3.58%	912	277	35	3.84%
	Life Care	437	271	17	3.89%	--	--	--	--
	Private Higher Education	632	250	54	8.54%	643	271	28	4.35%
	Public Higher Education	302	330	10	3.31%	303	347	13	4.29%
	Retail Electric	487	349	24	4.93%	496	362	16	3.23%
	Toll Roads	78	336	4	5.13%	76	356	4	5.26%
	Water & Sewer	1,499	404	63	4.20%	1,546	405	63	4.08%
	Wholesale Electric	172	206	8	4.65%	175	193	4	2.29%
Governmental Bond Sectors	Cities	2,006	442	99	4.94%	1,952	460	85	4.35%
	Counties	1,491	532	83	5.57%	1,507	607	74	4.91%
	Dedicated Tax	242	399	12	4.96%	282	366	7	2.48%
	School Districts	3,504	362	134	3.82%	3,193	388	134	4.20%
	States & Territories	54	487	3	5.56%	56	614	4	7.14%

Note: Outlier audit time (in days) was calculated for each sector each year by adding two standard deviations to the average audit time for the sector each year. The number of outlier audits for each sector each year was calculated by counting the number of audits that were completed in a number of days that exceeds the outlier audit time of two standard deviations above the mean.

States and territories also showed excessively slow audit times for both 2022 and 2021, with three (California, Nevada, and Puerto Rico) having audit times exceeding 487 days and four (California, Nevada, Puerto Rico, and U.S. Virgin Islands) with audit times greater than 614 days, respectively. Notably, California reduced its audit time to 524 days for fiscal year 2023.

However, this pattern of significant delay is not improving for other issuers since both states of Illinois and Nevada have still not reported their 2023 audits, which reflects a new record for lateness among states (excluding territories). At the time of this report's release, they are already over 700 days past their fiscal year-end and counting! This is important since states should be a model for all municipal bond issuers.

Conclusion

Having timely audits for municipal bond issuers is imperative for many reasons. Timely audit reporting ensures accurate financial data for effective credit evaluation, market pricing, and informed decision-making by stakeholders such as watchdog groups, investors, and taxpayers. It also fosters confidence by enabling governmental officials to mitigate risks, drive continuous improvement, and efficiently allocate resources. Due to this much broader and crucial purpose that goes far beyond simply revealing fraud or malfeasance, we used this year's report to emphasize persistently and excessively slow audit times. It is important to spotlight these poor performers so that stakeholders can properly assess municipal bond issuers' financial position, both currently and their likely future direction, which can only be relayed through their audit and the auditor's opinion.

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