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Chronically Late Municipal Bond Audits Further Delayed in FY 2018

January 10, 2020

Every year since 2007, Merritt Research Services¹ (Merritt Research) documents the time it takes for municipal bond borrowers to complete their annual financial audits. The results of the study consistently show slower reporting than what you would expect from borrowers participating in the securities markets. By now, it has been well documented that most municipal audits lag the corporate standard of 60 days by a range of three to six more months.

Slower audit turnaround times increase the likelihood that analysts will miss signals that may adversely affect municipal bond pricing and catch investors or other stakeholders off guard. In short, the useful value of the audits will become either stale or diminished, or potentially not useful at all. That concern is aggravated by the fact that the Merritt Research study evidenced that weaker borrowers generally experience longer delays than better quality credits to complete their audits.

This year's findings are particularly disappointing. Despite a decade of placing a spotlight on the problem², audit reporting took another step down to tie the slowest median audit time recorded over the past eleven years.

By compiling approximately 10,700 different borrowers, Merritt Research Services found that the median audit time grew to 156 days for Fiscal Year 2018, two days longer than the previous year. The last time the median audit time was this slow in the last 11 years was 2015. Over the same time period, the fastest reported time happened in 2010, when the study's all sector median marked 147 days.

¹ Merritt Research Services became a wholly-owned Investortools, Inc. company on October 31, 2019.

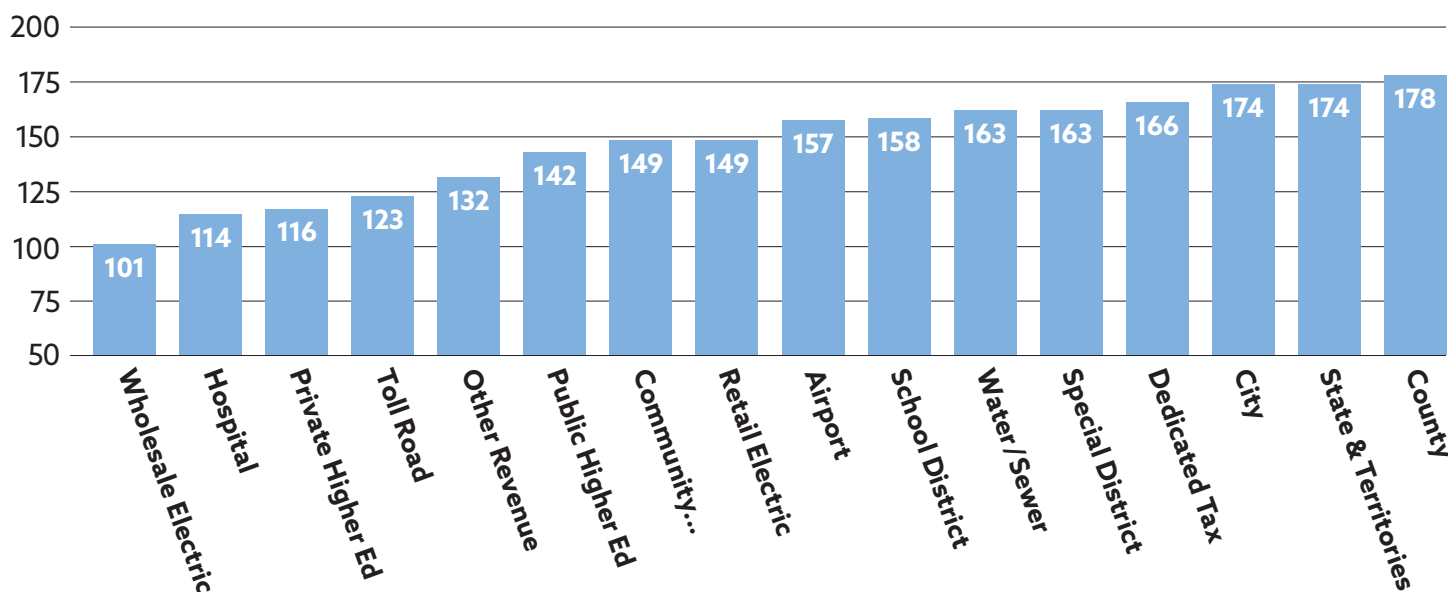
² Merritt Research Services' first annual study was published in November, 2010 in a report entitled: "Just How Slowly Do Municipal Bond Annual Audit Reports Waddle in after the Close of the Fiscal Year?"

Fiscal Year 2018 Results:

CHART 1

Municipal Bond Sector Audit Times* by Number of Days After the Close of the End of the 2018 Fiscal Year

Revenue bond type municipal bond credit sectors are more timely than those by Governmental Issuers. Wholesale Electric, Hospitals and Private Higher Ed lead the list of fastest sector reporters. Counties, States and Cities are the slowest sectors.



Source: Merritt Research Services, LLC, an Investortools, Inc. Company. Data compiled based on records available as of December 6, 2019.
*Median Audit Times are defined and measured by calculating the difference between the Fiscal Year End to the audit signing date.

The Merritt Research Services audit timing study uses as its assessment measure the time elapsed from the end date of the fiscal year to the date in which the audit is signed. That's different from the time period cited by other information data sources, particularly the Municipal Securities Rulemaking Board's Electronic Municipal Market Access (EMMA), which cited in their Fact Book more recently. EMMA measures the time elapsed from the end of the fiscal year to the time which the audit is posted on its website. As we have mentioned in previous years, borrowers may not post the audits to EMMA for days and sometimes weeks after they are finished. Common reasons may be related to official sign-off by governing officials and boards, or, in some cases, state auditors.

The Merritt Research study includes municipal bond obligors from 26 sectors, but focuses on 16 primary sectors³ which comprise the bulk of municipal bond issuance in number and asset size. Borrowers, which were less heavily represented, were largely related to non-investment grade obligors⁴.

Historically the Merritt Research study has found certain municipal market credit sectors consistently do better than others. This past year, the three fastest sector median times belonged to perennial sector leaders of the pack: Wholesale Electric, Hospitals and Private Higher Education. All three have finished in that order for speediest reporting

³ Municipal bond credit sectors that received primary focus by Merritt Research included Airport, City, Community College, County, Dedicated Tax, Hospital, Other Revenue, Private Higher Ed, Public Higher Ed, Retail Electric, School District, Special District, State & Territories, Tollroad, Water & Sewer and Wholesale Electric. Sectors in bold are considered standard primary coverage Merritt Research sectors. Non-bold sectors are tracked by Merritt Research only on a custom request basis; sample sizes are smaller relative to the entire sector subset.

⁴ Other sectors not separately tracked for median times were Land Districts, Private K-12 Education, Life Care, Gas, Ports, Charter Schools, Solid Waste, Special Projects, Nursing Homes and Student Loans.

in each of the last ten years that Merritt Research has been tracking audit times. Albeit, each of these three sectors back stepped by a few days in fiscal year 2018 from the prior year.

On the other side of the coin, those municipal categories or sectors which produced the tardiest audit reporting times in the study have displayed similar sluggish finish times over the past eleven years. For the third year in a row, Counties found themselves in the worst slot with a median sector time of 178 days; though that was two days better than last year, albeit the best county sector finish in over the past eleven years. States & Territories and Cities tied for the next worst position (174 days). State & Territories finished a median day faster than in 2017, while the City sector placed a day slower. Other poky credit sectors were: Dedicated Tax, Water & Sewer, Special Districts, School Districts and Airports.

Setting a Reasonable Target for Completing a Municipal Audit

The accompanying comparison table shows median audit completion times by sector as tracked by Merritt Research since 2008 on approximately 125,000 municipal bond audits involving as many as 12,000 unique municipal bond obligors. Over the last ten years, Merritt Research categorized the sectors into three groups. The first group (shaded in green) comprises those sectors that achieved median audit times of 120 days or less from the end date of the fiscal year. The second group (shaded in yellow) includes those that finished their reports in 121 to 149 days. The third group

CHART 2

Merritt Research Services 2018 Annual Audit Timing Study

MedianTime in Days for Audits to be Completed by Municipal Bond Sector (FY 2008 to FY 2018)

SECTOR	RECENT	Previous Year	FY 2018	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	FY 2011	FY 2010	FY 2009	FY 2008	11 Year	11 Year
	TREND	TREND												SECTOR	SECTOR
	2018 vs. 2017	2017 vs. 2016	MEDIAN	MEDIAN	MEDIAN	MEDIAN	MEDIAN	MEDIAN	MEDIAN	MEDIAN	MEDIAN	MEDIAN	MEDIAN	MEDIAN	MEDIAN
Wholesale Electric	Worse	Better	101	99	102	105	100	102	100	107	94	90	93	100	99.4
Hospitals	Worse	Same	114	111	111	112	112	112	110	111	110	109	108	111	110.9
Private Higher Education	Worse	Better	116	115	116	115	114	114	113	112	112	114	107	114	113.5
Tollways	Worse	Better	123	120	125	128	123	123	123	125	119	120	109	123	121.6
Other Revenues	Better	Better	132	135	137	146	132	130	138	144	138	135	139	137	136.9
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Airports	Worse	Worse	157	155	154	160	144	150	150	151	147	154	158	154	152.7
School Districts	Worse	Same	158	153	153	154	144	148	144	146	146	146	147	147	149
Special Districts	Better	Better	163	167	173	167	155	160	156	144	158	153	152	158	158.9
Water/Sewer	Same	Worse	163	163	160	161	154	155	153	158	155	154	157	157	157.5
Dedicated Tax	Better	Same	166	168	168	172	167	166	167	166	161	160	158	166	165.4
Cities	Worse	Same	174	173	173	175	170	171	173	173	171	169	169	173	171.9
States & Territories	Better	Better	174	175	176	184	176	176	180	182	182	182	176	176	178.5
Counties	Better	Better	178	180	181	183	181	181	179	181	181	179	181	181	180.5

Median Days of All Credits in Sectors Listed Above	153	149	149	151	142	146	143	144	144	144	145.5	147.5
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Median Audit time in days for all Municipal Bond Borrowers in Database without clustering by sector, including sectors not shown in the table: Land Districts, Private K-12 Education, Life Care, Gas, Ports, Charter Schools, Solid Waste, Special Projects, Nursing homes and student loans.

Median Days of All Credits in Merritt Research Database	156	154	154	156	148	150	150	152	147	147	147
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Sectors shaded in Green show a median completion audit time of 120 or less from the end date of the fiscal year.

Sectors shaded in Yellow show a median audit time 121 to 150 days.

Sectors shaded in Red show a median audit time worse than 150 days after the close of the fiscal year.

Source: Merritt Research Services, an Investortools, Inc. Company. Sector Medians days after the end of the fiscal year 2018 based on audits available on December 6, 2019

encompasses the tardiest sectors (shaded in red) with finish times in 150 or more days after the close of the fiscal year. The color-coded pattern indicates that most sectors show consistent annual times over the past eleven years.

Although a 60-day deadline is the SEC standard for most regulated corporate bond markets, no municipal credit sector has historically come close to the 60-day mark and few reach the secondary goal (90 days) for smaller companies. The municipal bond market and the Government Finance Officers Association has held to the convention of completing audits within 120 days or less. Lending credibility to the notion that this is an achievable goal, Merritt studies showcase a significant number of accomplished borrowers who have met the 120-day standard. This timeframe for financial audits well within reach and should be set as an objective for every governmental and not-for-profit borrower.

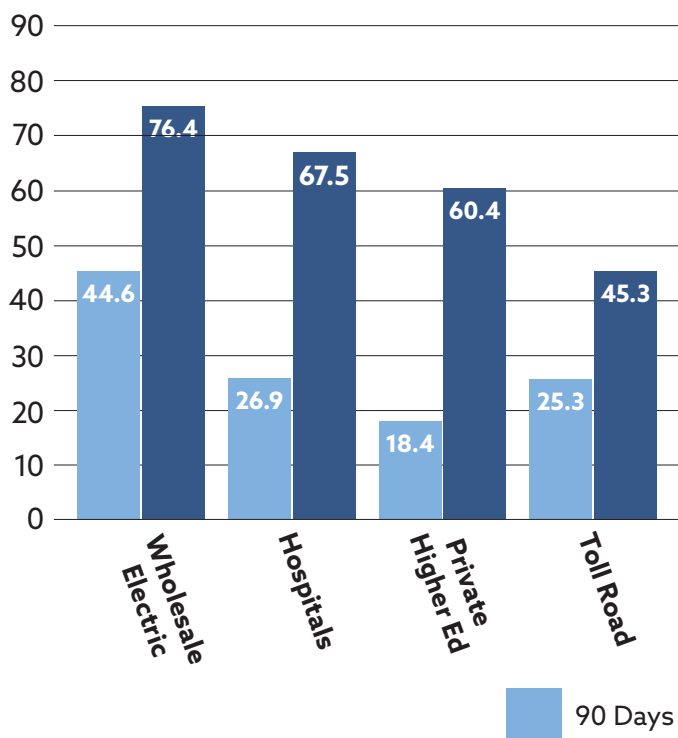
The chart below illustrates that a little more than a quarter of 10,712 municipal bond obligors for all sectors tracked by Merritt Research completed their audit time in 120 days or less. By adding a month to the picture, 45% of all municipal bonds are done within 150 days.

The percent of borrowers reaching a 120-day target improves considerably when the focus is narrowed to the enterprise oriented revenue bond sectors. The sector that leads all others is the Wholesale Electric Public Power entities with nearly 80% of the audits crossing the finish line in 120 days. Sixty-eight percent of Hospitals and 60% of public higher education borrowers made the 120-day mark.

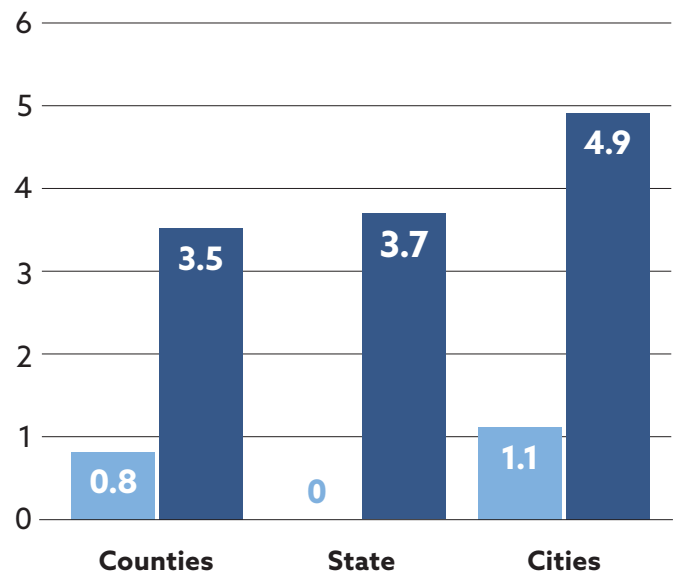
CHART 3

Percent (%) of 2018 Audits Completed in 90 and 120 Days or Less by Fastest and Slowest Sectors

The Best Sectors (% of All Audits)



The Worst Sectors (% of All Audits)

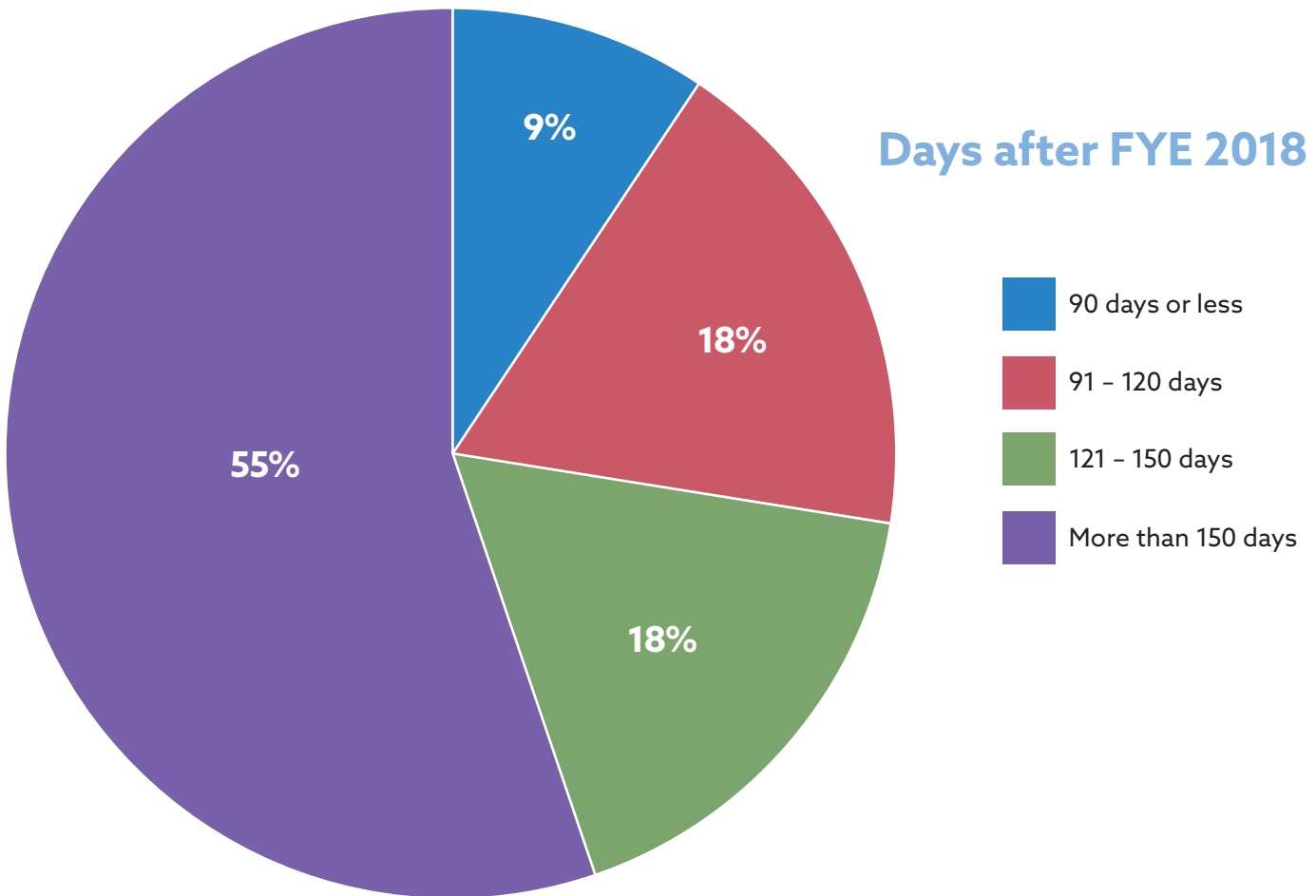


Source: Merritt Research Services, an Investortools, Inc. Company. Data compiled based on records available as of December 6, 2019.

Enumerating the borrowers among municipal bonds involving governmental bodies that meet the 90-day goal, no less the 120-day goal, finds a rather sparse crowd, compared to separate agency enterprises or non-profit organizations. While no sector in the universal municipal bond market measures up to the corporate bond market, there is especially slim pickings in the governmental field.

CHART 4

Breakdown (%) of Municipal Bond Borrowers (All Sectors) by Fiscal Year Audit Time*



Source: Merritt Research Services, an Investortools, Inc. Company as of December 6, 2019. Total number of Fiscal Year 2018 municipal bond audits used in this analysis is 10,712. *Audit Time is measured from the end of the fiscal year to the date that the audit is signed.

Nevertheless, there is enough evidence that achieving the 120-day or even the 90-day rule even in the governmental area is far from impossible. Indeed, there are numerous large and small organizational standouts that regularly produce their audits in that timeframe. Look at some of the best:

Honor Roll Sample of Large Governments or Not-For-Profit Organizations that finished their FY 2018 audits in 90 days or Less (Credit sector in parenthesis):

Municipal Bond Borrower (Sector)	Days After FYE	Auditor
Port Authority of New York & New Jersey (Airport)	65	KPMG, LLP
City of Columbus, OH (City)	87	Plante & Moran, PLLC
Columbus Regional Airport, OH (Airport)	79	Plante & Moran, PLLC
Santa Barbara County, CA (County)	59	Brown Armstrong Accountancy Corp
Maine Municipal Bond Bank, ME (Dedicated Tax)	61	Baker Newman & Noyes, LLC
Sales Tax Asset Receivable Corporation, NY (Dedicated Tax)	67	Toski & Co, CAPs, PC
New York Local Government Assistance Corp, NY (Ded. Tax)	69	BST & Co CPAs, LLP
Mercy Health Corp, IL (Hospital)	45	Wipfli, LLP
Kaiser Foundation Health Plan, CA (Hospital)	45	KPMG LLP
Mayo Clinic, MN (Hospital)	45	Ernst & Young, LLP
Marquette University, WI (Private Higher Education)	72	KPMG LLP
Massachusetts Institute of Technology, MA (Private Higher Ed)	76	PricewaterhouseCoopers, LLP
Loyola University of Chicago, IL (Private Higher Ed)	80	Deloitte & Touche, LLP
George Washington University, DC (Private Higher Ed)	80	PricewaterhouseCoopers, LLP
University of South Alabama, AL (Public Higher Ed)	51	KPMG LLP
University of Pittsburgh, PA (Public Higher Ed)	83	KPMG LLP
Pennsylvania State System of Higher Ed, PA (Public Higher Ed)	88	CliftonLarsonAllen, LLP
Sacramento Municipal Utility District, CA (Retail Electric)	46	Baker Tilly Virchow Krause, LLP
South Carolina Public Service Authority, SC (Retail Electric)	59	Cherry Bekaert, LLP
Douglas County (Omaha) SD #1, NE (School District)	81	Seim Johnson, LLP
Baltimore City Public Schools, MD (School District)	88	CliftonLarsonAllen, LLP
New York State Bridge Authority, NY (Tollroad)	65	EFPR Group, CPAs, PLLC
Nassau County Bridge Authority, NY (Tollroad)	74	Morse & Company CPAs, LLP
Kansas Turnpike Authority, KS (Tollroad)	80	Allen, Gibbs & Houlik, LC
East Bay Municipal Utility District, CA (Water & Sewer)	58	Maze & Associates
Massachusetts Water Resources Authority, MA (Water & Sewer)	62	CliftonLarsonAllen, LLP
JEA - Water & Sewer Fund, FL (Water & Sewer)	64	Ernst & Young, LLP
Citizens Energy Group & Sub, IN (Water & Sewer)	73	Deloitte & Touche, LLP
WPPI Energy, WI (Wholesale Electric)	58	Baker Tilly Virchow Krause, LLP

Perhaps the two best role models are cities that consistently overcome any structural governmental accounting hurdles that might stand in the way of fast turnaround times: The City of Columbus, Ohio and New York City. Columbus completed its independent audit by a private CPA firm after the end of the fiscal year in 87 days. That's the sixth time in the last ten years in which they achieved that mark in 90 days or less. Moreover, they have been able to finish their private audits in 120 days or less for ten straight years. Columbus' stellar record has been championed by city auditor, Hugh Dorrian, who served in that capacity for 48 years, and by his successor, Megan Kilgore. Although Ohio cities, including Columbus, are still subject to an additional statutory review, subject to an adjustment by the State of Ohio

Auditor, revisions are rare if at all. In the interim, stakeholders can examine the audited books in a timely manner. New York City also deserves special mention; they finished their audit, which is extremely complex in 122 days, the 11th straight year in which they have signed their audit in 123 days or less. Although New York's achievement is in large part due to the fact that it is motivated by a statutory requirement, it provides proof that the task can be done.

The listing above does not mean to suggest that small or medium sized governmental or not-for-profit organizations are unrepresented on the list of fast track reporters. The list of smaller borrowers that complete their books in less than 120 days is impressive and extensive (see the list of best and worst reporters by sector in the appendix to this article). The takeaway point to these examples is simply to encourage and give confidence that faster audit times for all municipal sectors are possible and not limited to one or two cases.

Significance of Governmental Accounting Rules

Some municipal revenue bond sectors such as not-for-profit hospitals and private higher education generally follow Financial Accounting Standards Board (FASB) accounting rules used by private sector organizations. By structure and purpose, these municipal credit sectors are more aligned to corporate-like entities and are perhaps more inclined to be run by private sector governance managers and boards.

However, many revenue bond borrowers are governmentally run departments and agencies (e.g. water & sewer, municipal electric utilities, airports and agencies with dedicated tax support) that must follow Governmental Accounting Standards Board (GASB) rules. Frequently, these revenue bonds don't issue independent audits. Their audits figures are incorporated into the "parent government" audit produced by a state, city or county and included in an entity-wide financial statement.

In contrast to the revenue bond sectors, which are usually single-purpose enterprises, governmental entities such as states, cities, counties often have more complex structures with sub-organizations that are probably akin to corporations with subsidiaries. Governmental organizations follow GASB accounting rules, which are thought to be more complicated because they must prepare books based on both the accrual-based approach for the entity-wide statements as well as a modified accrual basis used for separate funds, referred to as fund accounting. When GASB 34 was adopted some 20 years ago, there was also a fair share of private sector opposition to GASB 34 from rating agencies and some analysts, some of whom sympathized with the governmental rationale and others who might have resisted change for other reasons.

The ultimate resolution of the issue resulted in a combination of the two approaches. The blend of two different approaches stems back to the time before entity-wide accounting (GASB 34) was adopted, as a compromise satisfying governments that resisted the new accrual accounting standards because most of them use cash accounting for budgeting, which was closer to the modified accrual fund accounting they had been using.

Despite the potential challenges associated with GASB 34, the entity-wide accrual-based method provides a rich base of numbers that provide a truer and more holistic financial position and, to a large extent, presents longer term assets and liabilities which enables predictive analysis of the government going forward.

Governments such as cities in New Jersey that follow a statutory approach to their accounting method, which resembles the pre-GASB 34 method, not only makes it harder to get a total financial condition bottom line, but they also don't have an argument that the audit report gets finished faster. Cities in New Jersey have a median reporting time of 218 days compared to the 174 day median for all cities in the nation.

Other Factors That Often Adversely Impact Audit Times

Some of the most frequently cited reasons for slow audit times are: (1) accounting rule changes, (2) troubled financial conditions, (3) involvement of state oversight auditors, (4) delays involving governmental component units and (5) governmental officials and governing boards that place a high priority on rapid completion of the audit document.

Accounting Rule Changes

Over the past ten years, governments frequently point to GASB rule changes, such as GASB Rule 34 on entity-wide accounting or Rules 67 and 68 involving pensions, which require substantially more data and more complex compilations, often involving input from pension plan audits. Moreover, the recent OPEB changes (Statements 74 and 75) may have contributed to longer audit times for some governments, especially school districts, in FY 2018 since the rules became effective for most local governments. In any case, the information should be welcome to not only analysts but also governance boards that now have a better grasp on this important liability issue.

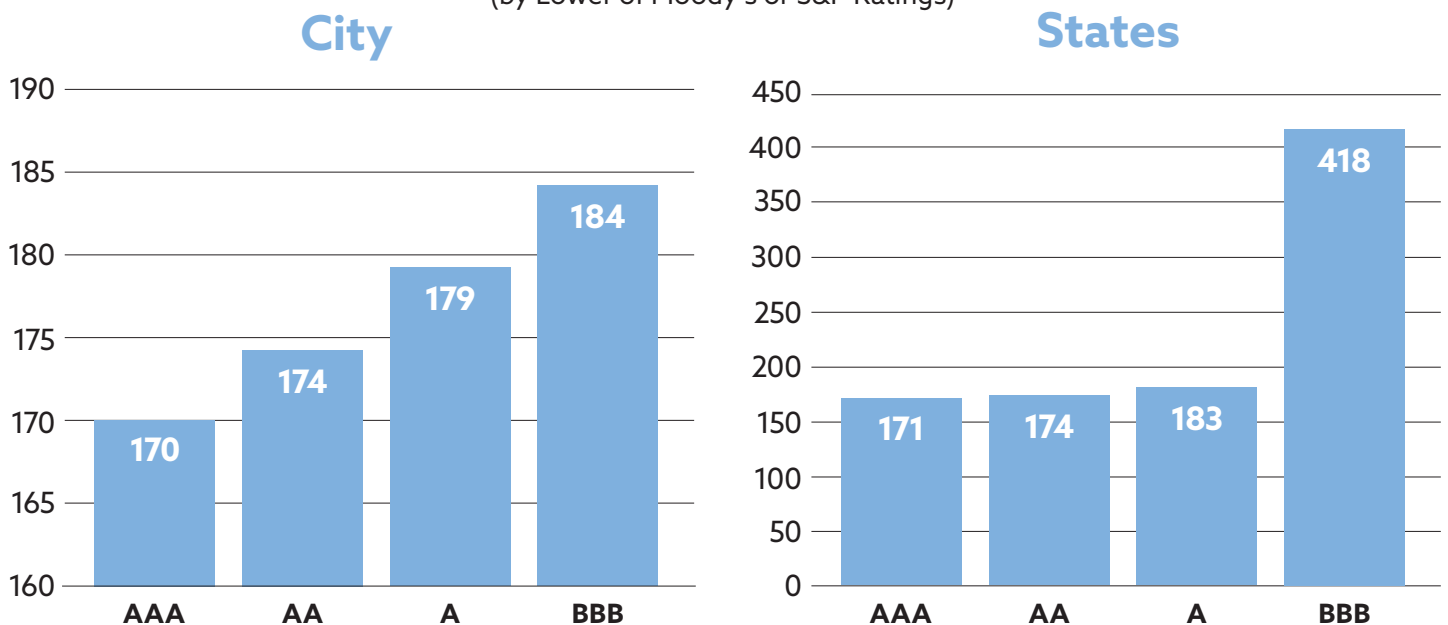
Credit Ratings and Audit Timing

Audit time medians for each base rating grade⁵ (i.e. "AAA", "AA", "A" and "BBB") generally got longer as you moved down the investment grade rating scale. The Merritt Research study showed the fastest median audit time group was most found among the best rated and highest quality borrowers. Slower completed audits were generally found among governments and organizations that were lower rated and had inferior credit metrics as measured by a number of single and aggregate credit metrics compiled by Merritt Research within its CreditScope software. That's not always the case, but the statistical relationship is prevalent. Exemplifying the trend, the state of Illinois had the worst audit and the lowest rating of any state government. Puerto Rico still had not issued their FY 2018 audits by the time of this study.

CHART 5

Audit Time by Rating for Cities and States Sectors Based on FY2018 Audit Times

Audit Time (Days to Complete Audit After Close of FY2018) based on Rating Bracket
 (by Lower of Moody's or S&P Ratings)



Source: Merritt Research Services, an Investortools, Inc. Company as of December 6, 2019. The BBB rating group is skewed due to the inclusion of only one state in the BBB Category - Illinois

A sector that did not show a high positive correlation to ratings was for school districts; most likely because of the so many states have state guarantee programs which often replace the underlying district credit rating with a higher rating reflecting the back up security.

Differential among Auditors

Governments or agencies audited by state auditor rather than private CPAs often have slower times in their sectors. For example, in the county sector, Alabama, Indiana, Washington, Minnesota, Oklahoma and Iowa had median audit times of over 200 days, which compares unfavorably to the national county median of 181 days. Slower state auditor reporter may have more to do with adequate audit staff available at the state level to handle so many large, medium, small and micro sized governments.

Although the Merritt Study reviewed the median audit time grouped by the independent auditor, the governmental sectors completed by larger, big name private sector auditors didn't appear to show much of an advantage over smaller auditing firms. However, in the hospital sector, several large accounting firms, with at least 10 audit clients in the Merritt study, beat the sector medians by significant margins. PricewaterhouseCoopers, LLP had a median hospital sector time of 97 days versus the total sector median of 114 days.

Complexity of Governmental Structure

Governments with component units⁶, such as a convention board, a library, an enterprise etc., can complicate and extend the time to complete an audit because there are times when these audits are done by separate auditors on different auditing schedules.

Internal Complications and Culture

From time to time, major internal accounting software system changes can slow down an audit; but these situations should be one-time occurrences. Cultural and leadership influences play a significant role in accelerating the audit time or slowing it down. In some cases, governmental officials may lack the urgency to place more emphasis on the accrual accounting audit because they are more focused on cash positions aligned to their budgets. Likewise, elected officials follow the lead of their financial officials because of a lack of appreciation or understanding of the rich content afforded them by an unqualified GAAP audit. Cultural or bureaucratic resistance can be overcome by organizational or governmental leaders, which make it a high priority to complete the audit faster for the sake of good governance, transparency and accountability.

Call For Change or Face Consequences

The National Federation of Municipal Analysts has recently been calling on the SEC to act to require municipal bond borrowers to hasten the public release of financial reporting. Senator Kennedy of Louisiana has been an outspoken critic of the late audits as well. The SEC is examining the issue and its alternatives.

Municipal pricing differentiation is almost always inconspicuous relative to audit times in large part due to market conditions caused by insufficient supply relative to the demand for municipal bonds, infrequent default history, low interest rates in general and relatively modest interest rate variances tied to credit quality. That could all change if one or a combination of these factors reverse.

⁵ Rating grade medians were based on the lowest of either Moody's or Standard & Poor's municipal bond ratings by obligors (creditors). For Moody's and S&P ratings, Merritt Research used the highest or senior debt rating for individual ratings (rating groupings did not distinguish fine tuning segmentation to include, "+" or "-" or "1," "2" or "3" rating variations).

⁶ GASB defines Component units as legally separate organizations, often governmental, for which the elected officials of a primary government are financially responsible.

For now, late audits should and may already factored into borrowing or trading yield levels on low quality municipal bonds. The problem in proving that point is that breaking out how much the proportional difference is due to quality weaknesses vs. late audit availability is blurred by the more dominant quality factor. Certainly, two year old audits in Puerto Rico exacerbate investor confidence and demand. Late auditing appears to be a frequent symptom of weaker quality as well as a notable flaw in good governance.

The Merritt Research study provides ample of evidence that a 120-day standard is a reasonable target that can be achieved by all borrowers in the near term if issuers put forth the effort. If municipal bond issuers procrastinate to meet that target, it is more likely that the government will mandate it. In order to avoid regulation of audit times, bond issuers should act now to make it a higher priority to accelerate the completion of audits and release them to the market promptly. Rating agencies and investors have the tools to penalize non-compliance, but they must choose to use them. Chronically late audit times should be reflected in lower bond ratings and higher issuer borrowing rates.

Notes and Disclosures

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The analysis is based on sources of the data that may include, but are not limited to, some or all of the following: State and Local Governments, their Agencies and 501 C-3 Organizations, U.S. Census Bureau, Bureau of Labor Statistics, Bureau of Economic Affairs, and other third party data research, issuer-derived documents and news media reports. Merritt believes the data to be reliable but does not make any representations as to its accuracy or completeness. Any commentary prepared and presented by Merritt Research is intended for informational purposes only and should not be solely relied on for investment decisions. There are no assurances that any predicted results discussed herein will actually occur.

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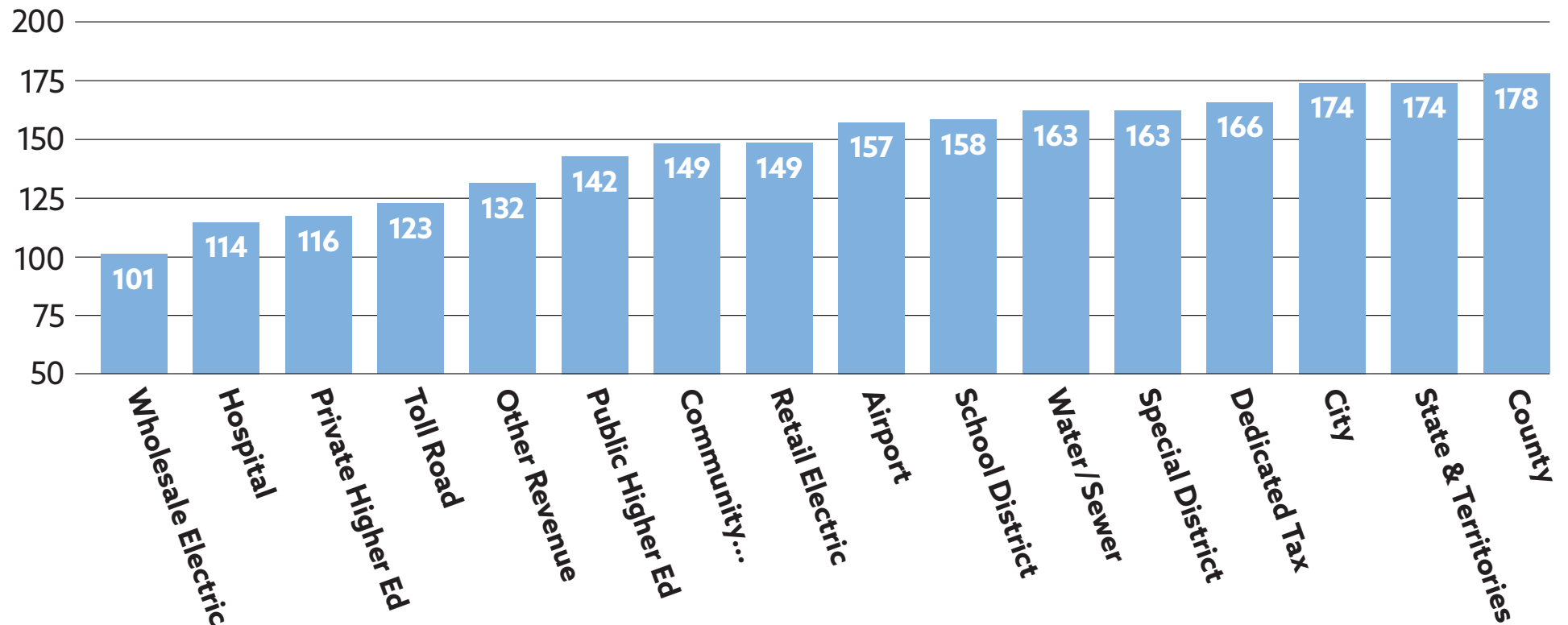
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Median Days of All Credits in Sectors Listed Above	153	149	149	151	142	146	143	144	144	144	145.5	147.5
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Median Audit time in days for all Municipal Bond Borrowers in Database without clustering by sector, including sectors not shown in the table: Land Districts, Private K-12 Education, Life Care, Gas, Ports, Charter Schools, Solid Waste, Special Projects, Nursing homes and student loans.

Median Days of All Credits in Merritt Research Database	156	154	154	156	148	150	150	152	147	147	147
---	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Sectors shaded in Green show a median completion audit time of 120 or less from the end date of the fiscal year.

Sectors shaded in Yellow show a median audit time 121 to 150 days.

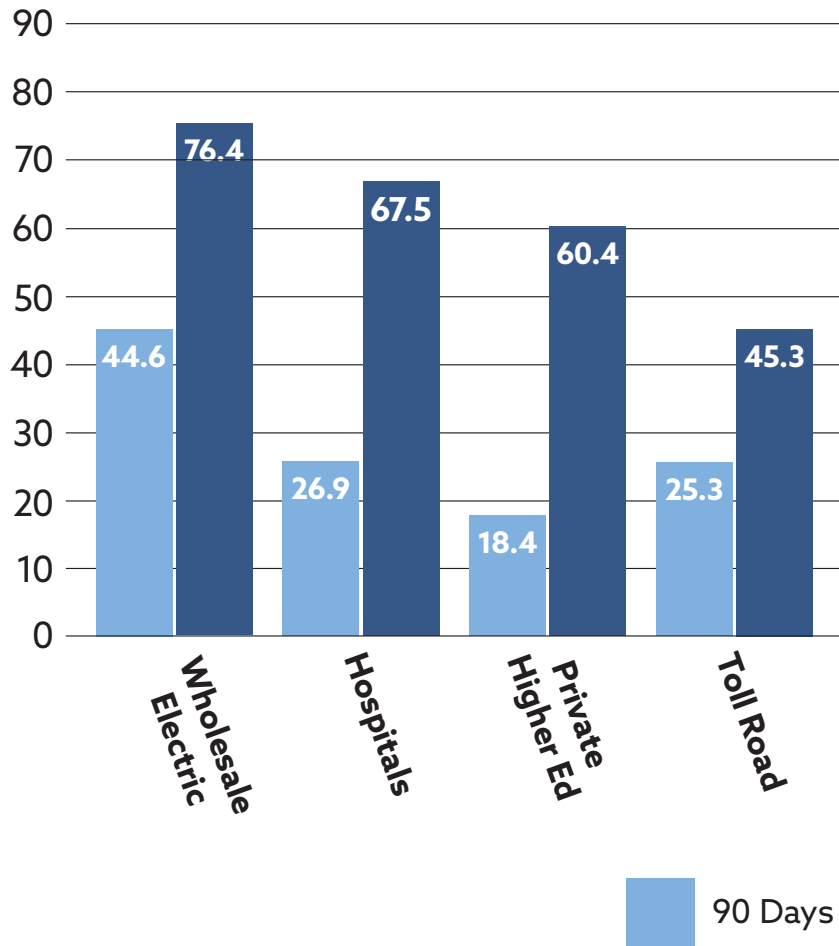
Sectors shaded in Red show a median audit time worse than 150 days after the close of the fiscal year.

Source: Merritt Research Services, an Investortools, Inc. Company. Sector Medians days after the end of the fiscal year 2018 based on audits available on December 6, 2019

CHART 3

Percent (%) of 2018 Audits Completed in 90 and 120 Days or Less by Fastest and Slowest Sectors

The Best Sectors (% of All Audits)



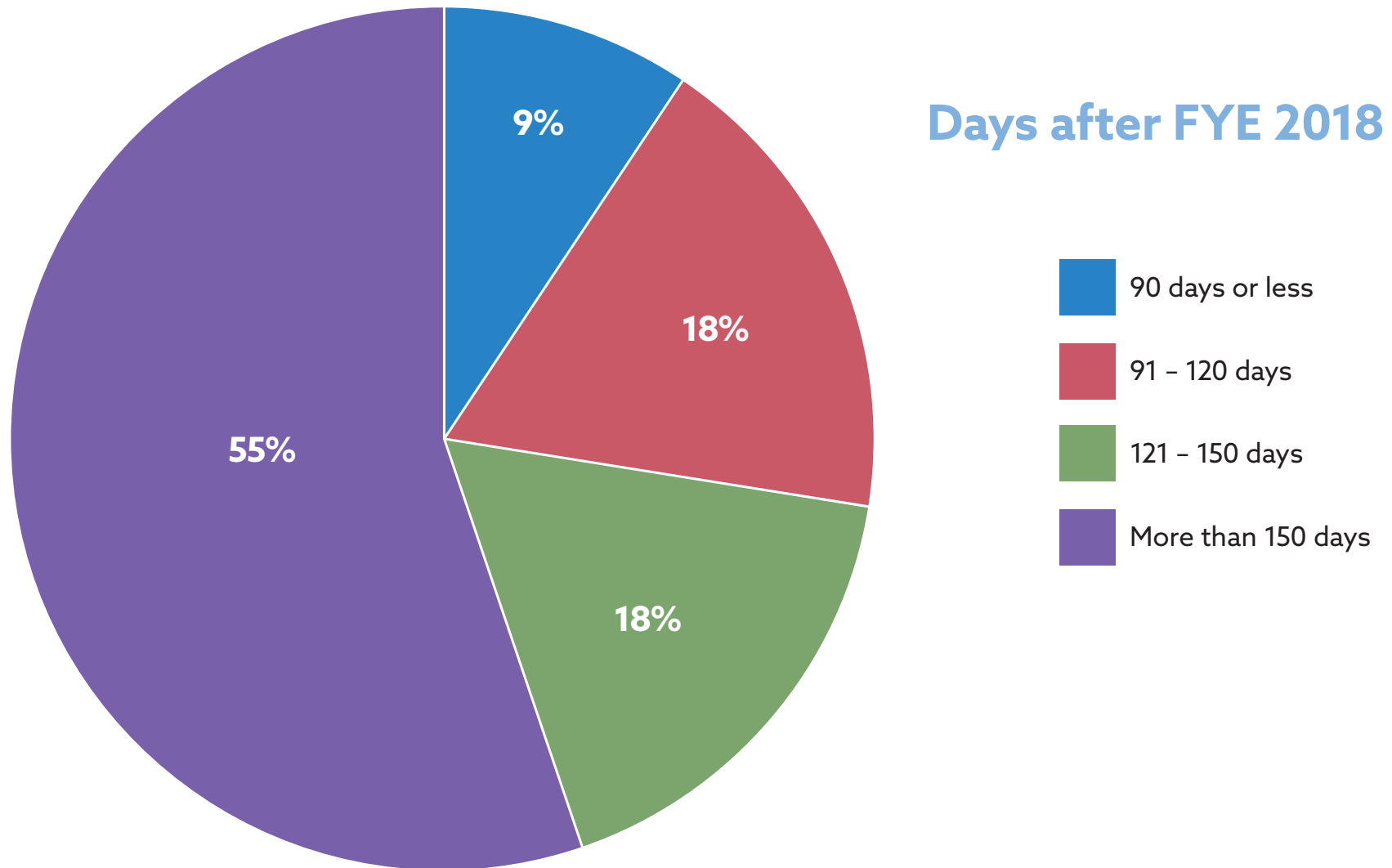
The Worst Sectors (% of All Audits)



Source: Merritt Research Services, an Investortools, Inc. Company. Data compiled based on records available as of December 6, 2019.

CHART 4

Breakdown (%) of Municipal Bond Borrowers (All Sectors) by Fiscal Year Audit Time*

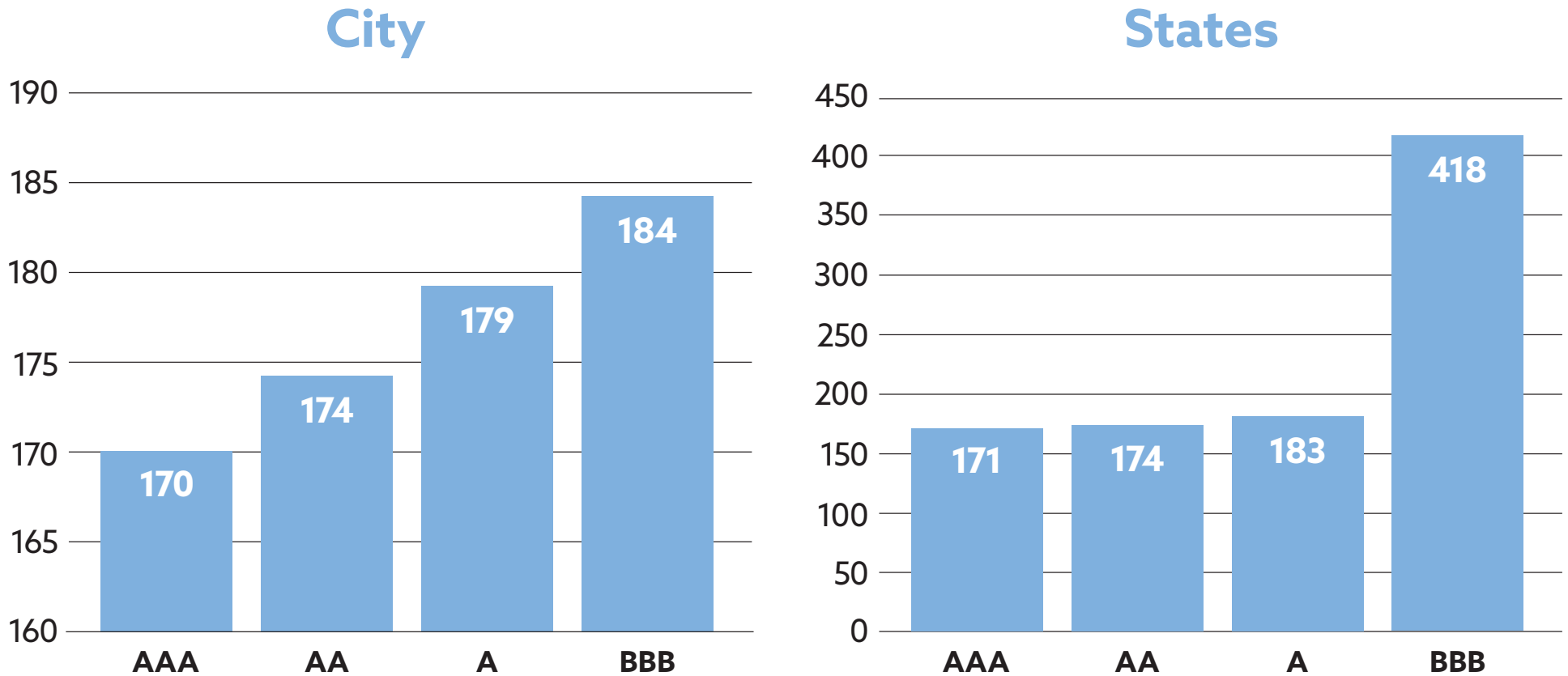


Source: Merritt Research Services, an Investortools, Inc. Company as of December 6, 2019. Total number of Fiscal Year 2018 municipal bond audits used in this analysis is 10,712. *Audit Time is measured from the end of the fiscal year to the date that the audit is signed.

CHART 5

Audit Time by Rating for Cities and States Sectors Based on FY2018 Audit Times

Audit Time (Days to Complete Audit After Close of FY2018) based on Rating Bracket
(by Lower of Moody's or S&P Ratings)



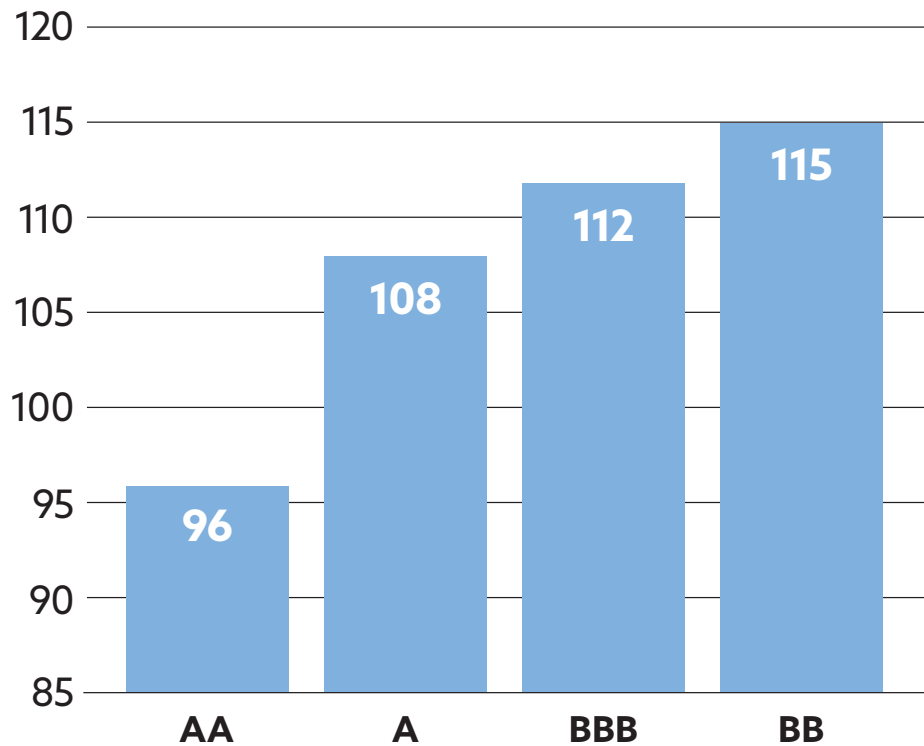
Source: Merritt Research Services, an Investortools, Inc. Company as of December 6, 2019. The BBB rating group is skewed due to the inclusion of only one state in the BBB Category - Illinois

CHART 6

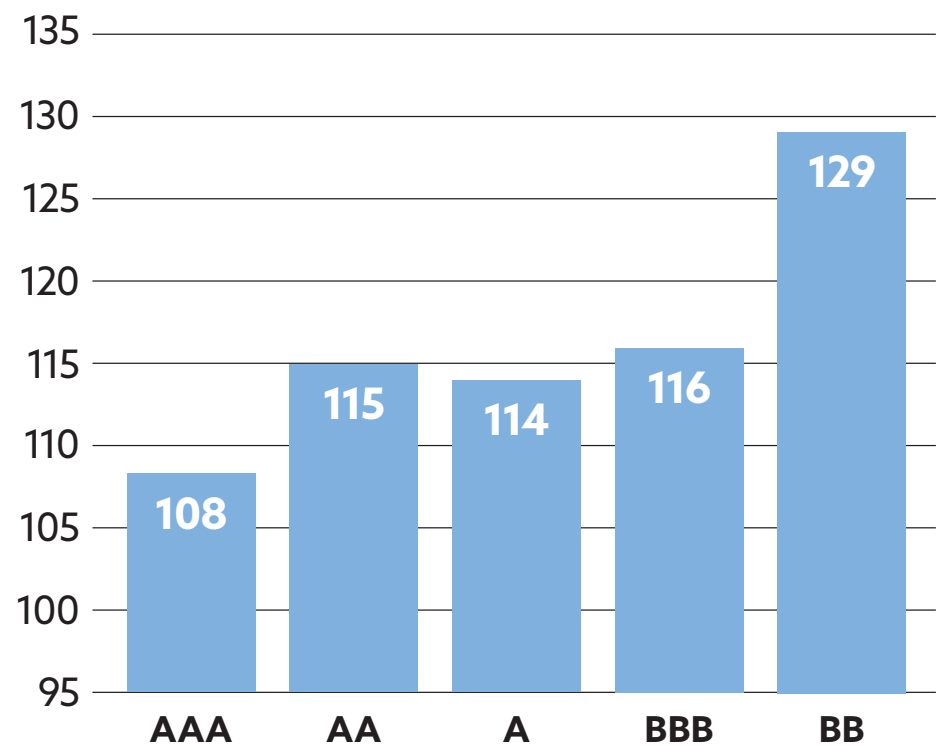
Audit Time by Credit Rating for Hospitals and Private Higher Ed Sectors Based on FY2018 Audit Times*

Audit Time based on Rating Bracket
(by Lower of Moody's or S&P Ratings)

Hospitals



Private Higher Ed



Source: Merritt Research Services, an Investortools, Inc. Company as of December 6, 2019. *Audit Time is measured from the end of the fiscal year to the date that the audit is signed.

CHART 7

Best and Worst States Based on Median Audit Times* for Its Cities

The Best* Number of Days after Fiscal Year End

North Carolina	123
Nevada	149
Minnesota	150
Virginia	151
Utah	153

The Worst* Number of Days after Fiscal Year End

Mississippi	252
Indiana	221
New Jersey	218
Massachusetts	213
Washington	202

Source: Merritt Research Services, an Investortools Inc. Company, as of December 6, 2019. *Eight states with less than five cities collected by Merritt were excluded from Study (VT, SD, WY, AK, AR, DE, WV and ND). *Audit Time is measured from the end of the fiscal year to the date that the audit is signed.

CHART 8

Best and Worst 2018 Audit Times by State Government Auditors (All Sectors)*

Applies to Governmental Borrowers Only

The Best* Number of Days after Fiscal Year End

Arizona Auditor General	173
Tennessee Comptroller	174
Ohio Auditor	181

Median for all cities regardless of auditor	178
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The Worst* Number of Days after Fiscal Year End

Georgia Dept. of Audits	269
Iowa Auditor of State	260
Alabama Dept. of Examiners of Public Accts	233
Florida Auditor General	227
Indiana St Board of Accounts	226
Washington St Auditor	223

Source: Merritt Research Services, an Investortools, Inc. Company *State Auditors are only included if the number of audits collected by Merritt Research totals twenty (20) borrowers or more. Audits collected by Merritt Research are based largely based on population criteria and institutional investor interest. Audit Time is measured from the end of the fiscal year to the date that the audit is signed.

CHART 9

The Three Best 2018 Audit Times by Cities, Counties and School Districts with Populations Over 100,000

City (Number of Days)	Columbus, OH	87
	Sioux Falls, SD	88
	Plano, TX	95
County (Number of Days)	Santa Barbara, CA	59
	San Juan, NM	76
	Kendall , IL	90
School District (Number of Days)	Millard PSD, NE	61
	Keller ISD,TX	73
	Douglas County SD, NE	81

Source: Merritt Research Services, an Investortools, Inc. Company, as of December 6, 2019.

TABLE 1

Best and Worst Municipal Bond Credit Sector Obligor (Borrower) Audit Times									
BEST				WORST					
	Auditor	Days After FYE		Auditor	Days After FYE		Days After FYE		
AIRPORTS									
1	Port Authority of New York & New Jersey	NY	KPMG	65	1	Salina Regional Airport	KS	Mize Houser & Company, PA	268
2	Chesapeake Regional Airport	VA	Dixon Hughes Goodman, LLP	66	1	Rapid City Regional Airport	SD	Ketel Thorstenson, LLP	268
3	Albany International Airport	NY	Marvin & Company, PC	77	3	Yeager Airport	WV	Suttle & Stalaker, PLLC	264
4	Columbus Regional Airport Authority	OH	Plante & Moran, PLLC	79	4	Syracuse Hancock International Airport	NY	Bonadio & Co, LLP	263
5	Raleigh-Durham International Airport	NC	Elliott Davis, PLLC	82	5	South Bend International Airport	IN	Indiana State Board of Accounts	262
					5	Manchester - Boston Regional Airport	NH	Melanson Heath	262
CITIES*									
1	Watseka	IL	CliftonLarsonAllen, LLP	63	1	Harvey	IL	Lauterbach & Amen, LLP	548
2	Penfield	NY	Bonadio & Co, LLP	65	2	Woodland	CA	Davis Farr, LLP	515
3	Florence	KY	Rankin, Rankin & Company	73	3	Stoughton	MA	Powers & Sullivan, LLC	461
4	Rocky Mount	NC	Martin Starnes & Associates, CPAs	83	4	Turlock	CA	Maze & Associates	452
4	Gilbraltar	MI	Plante & Moran	83	5	Maywood	CA	Van Lant & Fankhanel, LLP	444
6	Columbus	OH	Plante & Moran	87	6	Rialto	CA	Teaman, Ramirez & Smith, Inc	443
6	Powell	OH	Julian & Grube, Inc	87	7	Calexico	CA	The Pun Group, LLP	425
8	Kettering	OH	Plattensburg & Associates, Inc	88	8	Bartlesville	OK	Arledge & Associates, PC	418
8	Sioux Falls	SD	Eide Bailly, LLP	88	9	Huntington Park	CA	The Pun Group, LLP	396
10	Smyrna	TN	Yeary, Howell & Associates	89	10	Warwick	RI	Blum, Shapiro & Company, PC	388
COMMUNITY COLLEGE									
1	Greenville Technical College	SC	Cline Brandt Kochenower & Co, PA	76	1	Northwest Arkansas Community College	AR	Arkansas Legislative Joint Auditing Committee	360
1	Tyler Junior College District	TX	Gollob Morgan Peddy, PC	76	2	National Park College	AR	Arkansas Legislative Joint Auditing Committee	353
3	Brazosport College District	TX	Kennemer, Masters & Lunsford, LLC	77	3	North Arkansas College	AR	Arkansas Legislative Joint Auditing Committee	338
3	Victoria County Junion College District	TX	Pattillo, Brown & Hill, LLP	77	4	Columbia Gorge Community College	OR	Moss Adams, LLP	303
5	McLennan County Junior College District	TX	Jaynes, Reitmeier, Boyd & Therrell, PC	80	5	Nassau Community College	NY	RSM US, LLP	273

*Fastest large city over 500,000 persons is Columbus, Ohio (10th straight year at 120 days or less. Six of the last ten years reported at 90 days or less. New York City audit completed in 122 days (11th straight year at 123 days or less). Smallest city in the study to report the fastest was Gilbralter, MI (pop. 4,503) at 83 days. Watseka, the number one city in study has population of 4,860.

COUNTY							
1 Santa Barbara County	CA	Brown Armstrong Accountancy Corp.	59	1 Ravalli County	MT	Doyle & Associates, PC	474
2 Gibson County	TN	Tennessee Comptroller of the Treasury	68	2 Cherokee County	SC	McAbee, Schwartz, Halliday & Co	466
3 Grundy County	IL	Mack & Associates, PC	73	3 Tuolumne County	CA	Macias Gini & O'Connell, LLP	458
4 Newberry County	SC	Rish & Enzastiga	74	4 Campbell County	KY	Dean Dorton Allen Ford, PLLC	445
5 San Juan County	NM	Pattillo, Brown & Hill, LLP	76	5 Warren County	VA	Robinson, Farmer, Cox Associates	433
DEDICATED TAX							
1 Maine Municipal Bond Bank : TransCap Program Bonds	ME	Baker Newman & Noyes, LLC	61	1 Build Illinois Bonds	IL	Illinois Auditor General	418
2 Sales Tax Asset Receivable Corporation	NY	Toski & Co, CPAs, PC	67	2 Puerto Rico Sales Tax Financing Corporation Sales Tax Revenue Bonds	PR	KPMG LLP	353
3 New York Local Government Assistance Corporation Sales Tax Bonds	NY	BST & Co CPAs, LLP	69	3 New Jersey Economic Development Authority Cigarette Tax Revenue Bonds	NJ	New Jersey State Auditor	304
4 New York Convention Center Development Corporation Hotel Unit Fee Bonds	NY	EFPR Group, CPAs, PLLC	73	4 Mississippi Gaming Tax Revenue Bonds	MS	Mississippi State Auditor	286
5 Kansas Department of Transportation	KS	CliftonLarsonAllen, LLP	76	5 Pinal County Excise Tax Revenue Bonds	AZ	CliftonLarsonAllen, LLP	271
5 San Juan County Gross Receipts & Hold Harmless Tax 2015 B Bond	NM	Pattillo, Brown & Hill, LLP	76	5 St Johns County Sales Tax (also Transportation) Revenue Bonds	FL	Carr, Riggs & Ingram, LLC	271
HOSPITAL							
1 Mercy Health Corporation	IL	Wipfli, LLP	45	1 Medical Arts Hospital	TX	Durbin & Co, LLP	425
1 Kaiser Foundation Health Plan	CA	KPMG LLP	45	2 Northern Inyo Healthcare District	CA	Wipfli, LLP	319
3 Singing River Health System	MS	Dixon Hughes Goodman, LLP	46	3 Palm Drive Health Care District	CA	JWT & Associates, LLP	291
4 Regional Medical Center	IA	Eide Bailly, LLP	47	4 Loma Linda University Medical Center & Affiliates	CA	Ernst & Young, LLP	289
4 King's Daughters Health System & Subs	KY	MCM CPAs & Advisors, LLP	47	5 Chinese Hospital Association & Sub	CA	KPMG LLP	281
OTHER REVENUE							
1 Grundy Area Vocational Center	IL	Janet L Brown	45	1 Ohio Hi-Point Joint Vocational School District	OH	Ohio Auditor of State	396
2 West Virginia Housing Development Fund	WV	Brown, Edwards & Company, LLP	60	2 New Jersey Division of Motor Vehicle Surcharge Fund	NJ	New Jersey State Auditor	04
3 JEA - District Energy System	FL	Ernst & Young, LLP	64	3 Hill Country Community Clinic Inc	CA	BKD, LLP	270
4 Georgia Gwinnett College Student Center LLC	GA	Moore Stephens Tiller, LLC	67	4 Gainesville Pension Obligation (& Guaranteed Entitlement)	FL	Purvis, Gray & Company, LLP	260
4 UWG Campus Center (& Athletic Complex)	GA	Warren Averett, LLC	67	5 Polaris Career Center	OH	Ohio Auditor of State	258
4 Georgia Tech Facilities Inc	GA	Smith & Howard	67				
PRIVATE HIGHER EDUCATION							
1 Southern Wesleyan University	SC	James Dykhouse, CPA	39	1 Bethany College	WV	Crowe, LLP	416
2 Western Michigan University Thomas M Cooley Law School	MI	Plante & Moran, PLLC	59	2 Loma Linda University	CA	Ernst & Young, LLP	354
3 Hodges University Inc	FL	CliftonLarsonAllen, LLP	60	3 Cazenovia College	NY	Bonadio & Co, LLP	292
4 Methodist University	NC	Haigh, Byrd & Lambert, LLP	61	4 College of New Rochelle	NY	Freed Maxick CPAs, PC	275
4 Lincoln Memorial University	TN	Rodefer Moss & Co, PLLC	61	5 Stillman College	AL	Banks, Finley, White & Co	273

PUBLIC HIGHER EDUCATION							
1 University of South Alabama	AL	James Dykhouse, CPA	39	1 Evergreen State College	WA	Washington State Auditor	396
2 Saginaw Valley State University	MI	Plante & Moran, PLLC	59	2 Longwood University	VA	Virginia Auditor of Public Accounts	382
3 Ferris State University	MI	CliftonLarsonAllen, LLP	60	2 Southern Arkansas University	AR	Arkansas Legislative Joint Auditing Committee	362
4 Northern Michigan University	MI	Haigh, Byrd & Lambert, LLP	61	4 Virginia State University	VA	Virginia Auditor of Public Accounts	355
4 Texas Southern University	TX	Rodefer Moss & Co, PLLC	61	5 College of William & Mary	VA	Virginia Auditor of Public Accounts	334

RETAIL ELECTRIC*							
1 Swanton Village Electric Fund	VT	Kittell Branagan & Sargent	29	1 Altus Municipal Authority Fund	OK	BKD, LLP	433
2 Scottsboro Electric Power Board - Electric Fund	AL	Dyer & Smith, LLC	40	2 Ukiah Electric Fund	CA	Van Lant & Fankhanel, LLP	419
2 Wheat Belt Public Power District	NE	Dana F Cole & Company, LLP	40	3 West Liberty Electric Fund	IA	Iowa Auditor of State	354
4 Lyndonville Electric Department	VT	Kittell Branagan & Sargent	43	4 Starkville Electric Department Fund	MS	Watkins, Ward & Stafford, PLLC	318
4 Glencoe Light & Power Commission	MN	CliftonLarsonAllen, LLP	43	5 Burbank Water & Power - Electric Fund	CA	White Nelson Diehl Evans LLP	317

*Sacramento Municipal Utility Dist., CA was the largest municipal electric utility reported in 46 days.

SCHOOL DISTRICT*							
1 Sedalia School District #200	MO	Fick, Eggemeyer & Williamson	26	1 Whitfield County Board of Education	GA	Georgia Department of Audits & Accounts	520
2 Harbor Springs Public Schools	MI	Baird, Cotter & Bishop, PC	33	2 Gordon County Board of Education	GA	Georgia Department of Audits & Accounts	500
3 Charlevoix Public Schools	MI	Baird, Cotter & Bishop, PC	40	3 Floyd County Board of Education	GA	Mauldin & Jenkins, LLC	479
3 Onalaska Independent School District	TX	Weaver & Tidwell, LLP	40	3 Pickens County School District	GA	Georgia Department of Audits & Accounts	479
5 Dawson County School District #20	NE	KSO CPAs, PC	42	5 Jackson County Board of Education	GA	Georgia Department of Audits & Accounts	471

*Douglas County School District #1, NE (pop. 376,963) reported the fastest audit time of any school district with a population over 250,000 at 81 days.

STATE & TERRITORY*							
1 District of Columbia	DC	SB & Company, LLC	115	1 Illinois	IL	Illinois Auditor General	418
2 New York	NY	KPMG LLP	116	2 California	CA	California Bureau of State Audits	333
3 South Carolina	SC	South Carolina State Auditor & CliftonLarsonAllen, LLP	138	3 Northern Mariana Islands	MP	Deloitte & Touche, LLP	320
4 Kansas	KS	CliftonLarsonAllen, LLP	139	4 New Jersey	NJ	New Jersey State Auditor	304
5 Washington	WA	Washington State Auditor	144	5 New Mexico	NM	CliftonLarsonAllen, LLP	297

*Only two states and territories had not yet reported their FY 2018 audits -- Puerto Rico and US Virgin Islands

TOLL ROAD							
1 Buffalo & Fort Erie Public Bridge Authority	NY	Lumsden & McCormick, LLP	45	1 Richmond Metropolitan Authority - Expressway System	VA	Cherry Bekaert, LLP	360
2 Blueridge Transportation Group LLC	TX	PricewaterhouseCoopers, LLP	52	2 Burlington County Bridge Commission	NJ	Bowman & Company, LLP	299
3 New York State Bridge Authority	NY	EFPR Group, CPAs, PLLC	65	3 Osceola County Expressway Authority	FL	Moore Stephens Lovelace, PA	262
4 Niagara Falls Bridge Commission	NY	Chiampou Travis Besaw & Kershner, LLP	69	4 Mid-Bay Bridge Authority	FL	Carr, Riggs & Ingram, LLC	28
5 Maine Turnpike Authority	NY	Wipfli, LLP	73	5 Cape May County Bridge Commission	NJ	Ford, Scott & Associates, LLC	227
5 Mackinac Bridge Authority	MI	Plante & Moran, PLLC	73				
WATER/SEWER							
1 Schuylkill County Municipal Authority	PA	Jones & Co, PC	31	1 Turlock Water & Sewer	CA	Maze & Associates	452
2 Tusculumbia Water & Sewer System	AL	Dyer & Smith, LLC	33	2 Eureka Water & Wastewater Fund	CA	Moss, Levy & Hartzheim, LLP	445
3 East Norriton-Plymouth-Whitpain Joint Sewer Authority	PA	Maillie, LLP	35	3 Ukiah Water & Sewer	CA	Van Lant & Fankhanel, LLP	419
4 Tri-County Water District	ND	Mortenson & Rygh	37	4 Hawkins County First Utility District	TN	David M Ellis, CPA	418
5 Muscle Shoals Utilities Board	AL	Dyer & Smith, LLC	39	5 Marysville Wastewater Fund	CA	Richardson & Company, LLP	402
WHOLESALE ELECTRIC PUBLIC POWER							
1 Bonneville Power Administration	OR	PricewaterhouseCoopers, LLP	30	1 California Department of Water Resources Electric Power Fund	CA	Vavrinek, Trine, Day & Co, LLP	269
2 Associated Electric Cooperative	MO	BKD, LLP	37	2 Colorado River Commission	NV	Eide Bailly, LLP	191
3 Minnkota Power Cooperative	ND	Eide Bailly, LLP	42	3 Southeast Alaska Power Agency	AK	BDO USA, LLP	187
3 Square Butte Electric Cooperative	ND	Eide Bailly, LLP	42	4 Lafayette Public Power Authority	LA	Kolder, Slaven & Company, LLC	168
5 Tennessee Valley Authority	TN	Ernst & Young, LLP	45	5 West Texas Municipal Power Agency	TX	Weaver & Tidwell, LLP	166

Notes

List Based on Merritt Research Services collection of 10,763 data as of December 6, 2019. Merritt's collection of audits is not purported to be a complete record of all municipal bond obligors in the market; however, Merritt believes that the database is representative of the market and the number of audits counted represents the bulk of borrowers in the municipal bond market by debt outstanding. Municipal bond obligors that received a qualified audit opinion were not included among best (fastest).

Source: Merritt Research Services, an Investortools, Inc. Company.