S&P Global
Ratings

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Summary:

State of Ohio; Appropriations; General Obligation

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Summary:

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Credit Profile		
US$141.0 mil infrastructure GO bnds (Tax-Exempt) ser 2019A due 03/01/2039		
Long Term Rating	AA+/Stable	New
US$100.0 mil Third Frontier R&D GO bnds (Fed Taxable) ser 2019B due 05/01/2029		
Long Term Rating	AA+/Stable	New
Ohio GO		
Long Term Rating	AA+/Stable	Affirmed
Ohio State Treasurer, Ohio		
State of Ohio, Ohio		
Ohio St Treasurer (Ohio) APPROP		
Long Term Rating	AA/Stable	Affirmed

Rationale

S&P Global Ratings assigned its 'AA+' long-term rating to Ohio's $141 million series 2019A infrastructure improvement general obligation (GO) bonds (tax-exempt) and $100 million series 2019B Third Frontier Research and Development GO bonds (federally taxable). At the same time, we affirmed our 'AA+' long-term rating on the state's GO debt outstanding.

We also affirmed our 'AA' long-term rating on Ohio's capital facilities lease appropriation debt outstanding, and our 'AA-' long-term rating on the state's tax credit bonds, issued by Columbus-Franklin County Finance Authority, based on the application of our "Issue Credit Ratings Linked To U.S. Public Finance Obligors' Creditworthiness" criteria, published Jan. 22, 2018. The outlook on all long-term ratings is stable.

In addition, we affirmed our 'A-1+' short-term rating on the Ohio's variable-rate demand obligations (VRDOs) outstanding, reflecting the short-term self-liquidity component of our 'AA/A-1+' dual rating on outstanding lease-appropriation debt and our 'AA+/A-1+' dual rating on the GO debt outstanding.

Security and Use of Proceeds

Ohio's full faith and credit, revenue, and taxing power (excluding certain committed state receipts, such as state highway user receipts and net state lottery proceeds) are pledged and secure the series 2019A infrastructure improvement bonds, series 2019B Third Frontier Research and Development bonds, and the state's GO debt outstanding.

The short-term rating on the variable rate demand obligation reflects Ohio's self-liquidity, provided through the investment portfolio of the state treasury. In our view, Ohio's liquidation procedures indicate a strong likelihood to guarantee full and timely purchase price of the bonds tendered when due, as the portfolio's duration is maintained at less than one year and is typically managed to a weighted-average maturity of 90 days or less. With at least 25 days'

written notice to bondholders prior to the purchase date, these bonds are subject to mandatory tender upon conversion from the current weekly interest rate period to another period, or upon the provision of a substitute liquidity facility. In the event of a failed remarketing of the bonds, the maximum interest rate cannot exceed the lower of 9% or the maximum interest rate permitted by Ohio law.

In our view, the risk of higher interest costs under the maximum interest rate is mitigated by the relatively small amount of variable-rate debt compared with both Ohio's overall debt profile and the state's sufficient liquidity to absorb higher interest rate costs on the bonds for the duration of the interest rate period. As of Sept. 30, 2019, the state held more than $6.5 billion of cash and high quality, short-term, fixed-income securities ('A' or better long-term ratings, and 'A-1/P-1' short-term ratings), primarily consisting of U.S. treasury and agency securities, high-grade U.S. corporate notes and commercial paper, and money market funds rated 'AA' or better. These assets, in our opinion, provide ample coverage for the $383.75 million in VRDOs (approximately 3% of direct debt outstanding) and $300 million of the liquidity to be available for notes sponsored by the Ohio Market Access Program. S&P Global Ratings Fund Ratings And Evaluations Group regularly monitors the credit quality, liquidity, and sufficiency of the treasurer-pledged assets.

We understand that proceeds from the series 2019A infrastructure improvement GO bonds will be used to finance or assist in the financing of the cost of public infrastructure capital improvement projects of local subdivisions. In addition, proceeds from the series 2019B Third Frontier Research and Development bonds will be used to finance or assist in the financing of research costs and development projects to support various Ohio industry, commerce, and business.

Credit Overview

In our view, Ohio's credit fundamentals remain very strong. Through the first quarter of the current fiscal year, state officials report general revenue fund (tax and non-tax) receipts are $38.9 million, or approximately 0.5% above the budgeted estimate. However, federal grant revenue has experienced weaker-than-expected performance—with federal grants coming in $48.8 million (or 1.8%) below estimate—which is commensurate with a reduction in GRF Medicaid spending 1.3% below the budget estimate and 11.6% below the previous fiscal year. Overall, year-to-date expenditures are $54.4 million (or 0.5%) below budget estimate, due primarily to Medicaid and other agency savings.

However, future budget pressure is likely to come as Ohio's economic expansion has decelerated slightly and leading state economic indicators signal a contraction in manufacturing and softening service-sector growth, coupled with slowing exports relative to the previous year and weaker demand for residential housing construction. These factors could potentially blunt Ohio's fiscal margins compared to very strong surpluses recognized in the 2018-2019 fiscal biennium. In our view, the state has proactively managed its pension system and OPEB liabilities, which remain relatively low and manageable relative to other states. The Ohio Public Employees Retirement System's (OPERS) governing board recently voted on a proposal to lawmakers that could freeze the cost of living adjustment (COLA) in 2022 and 2023 for all retirees and delay COLA for all new retirees for two years, which is estimated to reduce the $24 billion unfunded liability by $3.4 billion and smooth investment losses from prior years. While this action ultimately requires legislative approval, we view the proposal as a potential credit positive and will monitor the impact of recommended reforms on future OPERS contributions and the unfunded pension liability.

The 'AA+' rating on Ohio's general creditworthiness reflects what we view as:

- A long track record of proactive financial and budget management, including the state's implementation of frequent and timely budget adjustments over time to counterbalance lower revenues, and the state's commitment to funding budget reserves that are expected to remain instrumental in managing budget gaps through economic cycles;
- Improved revenue and budgetary performance and restoration of the budget stabilization fund (BSF), which remains close to the statutory target of 8.5% of revenue over the last two biennia;
- Vast, broad, and diverse economy that has expanded steadily following weak performance through the past two recessions, albeit with concentration in manufacturing subsectors that anchor the state's employment base and are somewhat vulnerable to recessionary and international trade stressors. Notwithstanding, Ohio features several regional employment centers and a multitude of corporate headquarters in an expanding service sector; and
- Moderate debt levels with rapid amortization, and a conservatively managed capital and debt program, coupled with significant pension reforms and steady progress in funding other postemployment benefits (OPEB).

2020 - 2021 fiscal biennium budget (enacted)

Ohio was late in enacting a balanced budget for the fiscal 2020-2021 biennium by the June 30 constitutional deadline, which, in our view, was uncharacteristic for the state. The legislature and governor agreed upon a provisional spending plan that funded state agencies and operations at fiscal biennium 2018-2019 levels through July 17, 2019. We recognize that Ohio's budget impasse stemmed from contending legislative proposals related to personal and business income tax measures, education aid spending, and reforms to Ohio's Medicaid prescription drug program. Nevertheless, we believe that the brief budget impasse had minimal effect on the state's day-to-day operations. In addition, the temporary budget included necessary debt service and authority to make lease rental payment appropriations for the entire biennium, which, in our view, mitigated potential risks associated with late budget adoption. This was the first temporary budget for Ohio since 2009 and only the third temporary extension since 1991; both prior extensions occurred during substantial economic downturns.

On July 18, 2019, Ohio's governor signed the nearly $70 billion biennial appropriations act for 2020-2021. The GRF spending plan is nearly $34 billion (or 4% over the prior fiscal year) in the first year of the biennium, and a $36 billion expenditure appropriation (or 6% year-over-year increase) in the second year. The enacted budget does not impose new taxes or draw on the Budget Stabilization Fund (BSF). Excluding carryover balances from the prior fiscal year's GRF surplus, Ohio's budget is nearly structurally aligned under what we believe to be a conservative baseline forecast, as recurring revenues and transfers-in to the GRF are within 1% of total spending over the biennium.

The final budget enacted several tax policy and allocation changes that are estimated to reduce net GRF revenue by approximately $410 million for fiscal 2020 and $177 million for fiscal 2021. These modifications included a 4% reduction in Ohio's personal income tax rates, expansion of the earned income tax credit, the elimination of the lowest two income tax brackets effective in the 2019 tax year, and a two-year pause on the indexing of the income tax brackets through the 2020 tax year. Ohio partially offset these revenue reductions by narrowing the scope of eligible businesses that claim the small business income tax deduction and modernizing the state sales tax to align statutes with remote sales tax collection definitions under the South Dakota v. Wayfair court ruling.

The state's biennial spending plan prioritizes additional funding for health and social services, education, and environmental (particularly clean water) programs through the newly established H2Ohio Fund. Although Ohio has

observed lower Medicaid enrollment and costs due to an improving economy, it appropriated for a projected increase in state-only GRF Medicaid expenditures to meet its share of federal matching requirements over the biennium, coupled with a 1.4% net increase in mental health and developmental disability funding. In addition, Ohio increased its combined GRF and Lottery Fund appropriations in support of elementary and secondary education (approximately 4.1%) and primary operating funding for higher education (approximately 7.2%) over the next two years.

While revenue and expenditure estimates are currently outperforming budgeted estimates, we believe Ohio could potentially experience narrowing fiscal operating margins through the 2020-2021 biennium compared to the previous biennium due to our expectation that the state's economic indicators may soften, resulting in more-subdued sales and income tax receipts and the potential for rising social services spending.

2018 - 2019 fiscal biennium (actual)

Actual year-end 2019 results show that Ohio's total tax receipts and revenues for the GRF exceeded budgeted estimates by $651.1 million (2.9%) and $207.6 million (0.6%), respectively. In addition, total fund uses from the state's GRF are $619.6 million (1.8%) less than anticipated, driven largely by lower-than-estimated Medicaid enrollment and spending. Officials expected a moderate one-time reduction in personal income tax revenue due to a 3.3% cut to the employer withholding tax rate, but this was offset by growth in net personal income tax receipts, which were $313 million above budgeted projections. Ohio's sales tax revenue performance also remained strong as receipts (auto and non-auto sales) were $234.2 million (2.3%) above estimates. As a result, Ohio closed fiscal 2019 with a GRF fund balance of $1.15 billion, or approximately 3.4% of total fiscal year sources. The state will carry forward about $665.7 million of this ending balance, of which $168.8 million meets its statutory reserve target of 0.5% of fiscal 2019 GRF revenue.

The state ended the 2018 fiscal year with a GRF cash balance of $849.9 million (2.6% of total fiscal year sources), exceeding the state's statutory target of a 0.5% ending GRF balance. The majority of this surplus was used to make a $657.5 million deposit into the BSF, raising the balance by 32.5% to $2.69 billion, or by 8.3% of fiscal 2018 sources and 4.0% of total biennium sources, which we consider strong. The statutory ceiling for the BSF was increased to 8.5% of revenues in fiscal 2017, from a previous maximum of 5.0%, which we view as a credit positive for Ohio's fiscal flexibility since it aids the state in addressing budget volatility. This is especially significant for Ohio, which has to maintain budget balance throughout the year.

Economy

Currently, Ohio's age dependency (63.8%) tilts toward an aging population relative to the national average (61.8%). This variance could widen over the next decade, somewhat dampening our view of the state's future economic gains and slow its pace of employment growth compared to the U.S over the long-term. Additionally, lingering trade and geopolitical tensions could further decelerate short- to medium-term GDP growth prospects for Ohio, as the state's nominal GDP and employment base center on manufacturing and trade, which are traditionally more sensitive to these external factors.

Manufacturing is a significant component of Ohio's economy, flanked by a heavy presence in automotive and transportation equipment manufacturing. We believe its employment base is somewhat concentrated in the sector, representing 12.4% of Ohio's employment compared with 8.5% for the nation. According to IHS Markit, although the

Ohio's auto industry helped the state recover from the recession and contributed to recent job growth, peaking auto sales will likely force further manufacturing gains to come from other subsectors. Illustrating the recent shift in the state's automotive manufacturing, General Motors (GM) announced a shutdown of production at its Lordstown plant in eastern Ohio in March 2019, which could displace 1,600 of the company's 4,250 statewide workforce and disrupt suppliers' operations, and Honda's Marysville plant eliminated its second-shift production in August 2019 that could result in downsized operations at nearby engine and transmission plants. A prolonged work stoppage due to the United Auto Workers (UAW) strike against GM further pressured the sector's employment and idled its vast network of suppliers, leading to an estimated $55 to $60 million loss in weekly compensation for affected workers in Ohio. IHS Markit forecasts that the annualized rate of GSP growth will dip to 1.3% from 1.7%, due in part to the labor dispute. Ohio's plastics, steel, and rubber products manufacturing have grown as a share of manufacturing employment in recent years, but IHS Markit expects expanded production in this space to be a long-term capital-intensive endeavor.

In addition, the state's agricultural sector was hampered by substantial rainfall earlier this year, causing serious flooding in some areas and damaging businesses and farming infrastructure. The floods took its toll on agricultural producers, and Ohio farmers in particular were significantly delayed in planting crops this year. This compounded challenges for some of the state's farming communities already affected by tariffs on agricultural products and a period of lower crop prices. Consequently, farmers could continue to face tighter bottom lines in 2019 and 2020, though the sector overall remains steady financially. The longer-term prospect of Ohio's farm economy will depend on farmer's ability to create new markets to replace export markets and on the availability of federal subsidies, which hit a 12-year high in 2018. While subsidies may help many farmers make ends meet in the short term, less investment in heavy machinery might translate to softened sales tax collections.

The state is actively working to diversify its economy and management reported its JobsOhio program focuses on this goal by incorporating an advanced manufacturing and service sector strategy to grow employment in professional, technical, and scientific research. Ohio also features a robust health care and insurance sector, which have sustained employment and payroll gains. In our view, however, the state's continuing reliance on manufacturing makes it vulnerable to business cycle fluctuations and recent international trade conditions suggest rougher waters ahead for the sector. Ohio's economic development initiatives to distinguish itself beyond its traditional economic base, coupled with its proactively management and budget across business cycles will likely be essential to its long-term credit quality.

Debt, pension, and other postemployment benefits (OPEB)

We consider Ohio's debt ratios moderate. With limited exceptions, the state constitution caps debt service at 5% of GRF revenue plus net state lottery profits. Ohio remains below this cap and, based on projected debt issuance, we expect that debt service will remain within the constitutional cap. Debt amortization is rapid, in our opinion, with approximately 68% of tax-supported debt retired over the next 10 years. Ohio's pension liabilities remain average, in our view, with what we consider a relatively low three-year-average funded ratio of 79% across the three pension plans for which the state has a reported liability. The state's largest plan, Ohio Public Employees Retirement System (OPERS), reported what we consider a relatively low 77.5% pension funded ratio as of Dec. 31, 2018. However, the state benefits from a small unfunded liability relative to income and population measures. Ohio receives a positive adjustment for this strength as its ratio of unfunded liability to personal income is low at 1.2%, albeit with an unfunded

liability per capita at $559, which we view as moderate. The change to moderate from low reflects lower investment performance of plan assets relative to its assumed rate of return of 7.2%.

We consider the funding discipline of Ohio's pension plans to be average. According to our calculations, the state did not make minimum funding progress toward full funding in the most recent year, as total annual plan contributions performed under the level necessary to maintain static funding (cover a portion of the amortization in unfunded liability as well as interest and service cost drivers of the annual change in the liability). We believe this could weaken the strength of the state's pension liability profile over time.

However, we consider there to be an actuarial plan in place to reach full funding and contributions are expected to increase by approximately 3.25% due to a level percent amortization basis. OPERS uses the level percentage of pay method, which assumes rising future payroll and results in escalating absolute pension contributions over time due to the method's deferral of current contributions. Employer contributions for OPERS, the State Teachers Retirement System (STRS), and the Highway Patrol Retirement System (HPRS) are statutorily limited to 14%, 14%, and 26.5% of earnable salary, respectively. Each plan has an actuarial focus, in our opinion, and contributions have met or exceeded actuarially determined contribution in recent years. Full funding is expected within a closed 18 years. With a discount rate of 7.2%, we see some risk of cost escalation due to market volatility, as well as cost deferrals due to a static mortality assumption and the requirement to maintain the payroll growth assumption.

In contrast to many states, Ohio actively manages its OPEB liabilities and accumulated significant assets to offset these liabilities, which we believe limits future cost pressure. OPERS and HPRS report a net OPEB liability (NOL) of $13 billion and $357.8 million, respectively, as of the most recent annual plan reports. STRS reported a net OPEB asset (NOA) of $1.6 billion in fiscal 2018 compared with a NOL of $3.9 billion in fiscal 2017. This change followed the plan's determination that sufficient projected cash flows allow the use of a higher discount rate--the plan's assumed rate of return instead of the municipal bond rate. In our view, a change in discount rate does not fundamentally alter the fiscal health of a plan. The state reports a proportionate share of the NOL of 20.9% for OPERS and 0.38% for STRS. On a per-capita basis, we estimate the collective NOL decreased to $832 from $1,305 (incorporating STRS' NOA), which we consider below average. In an effort to better fund its pension plan, OPERS has suspended its diversion of 1% of its pension plan contributions to its OPEB plan. In the absence of employer contributions, the health care fund is expected to become insolvent after 12 years. Management reports the OPERS board is in discussions regarding the future of plan benefit changes; its intention is to fund its health care liabilities.

We have assigned a total score of '1.57' to Ohio under our state ratings methodology, in which '1.00' is the strongest score and '4.00' the weakest. This score corresponds to a 'AA+' rating.

(For additional information, see the full analysis on Ohio's general creditworthiness published Jan. 31, 2019, on RatingsDirect.)

Outlook

The stable outlook on Ohio's general creditworthiness reflects our view of the state's demonstrated commitment to proactive budget management and continuing focus on economic development initiatives and incentives to support

growth, which contributed to improved structural budget alignment in fiscal 2019 and an increasing reserve position entering the fiscal 2020-2021 biennium. The outlook also reflects our expectation that employer contributions to the state's pension plans will continue to meet or exceed actuarially determined levels. We note that meaningful postretirement liability reform efforts in previous biennia and statutory debt limits somewhat alleviate fixed-cost pressures over the long-term.

If Ohio's economic characteristics were to strengthen--including population and GDP growth that are more in alignment with the nation and more robust sector diversification--in a way that we believe better insulates the state from substantial fluctuations to its economic metrics and preserve its financial position across business cycles, we could take positive rating action. Although unlikely based on current operating trends and fiscal policy decisions, sustained structural budget misalignment and a sharp decline in Ohio's reserve position could pressure the rating. The state's concentration in the manufacturing sector could intensify this downside risk if national economic or international trade conditions were to materially weaken the state's core economic metrics.

Ratings Detail (As Of October 29, 2019)		
Ohio cultural & sports APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio GO		
Long Term Rating	AA+/Stable	Affirmed
Ohio GO VRDBs		
Long Term Rating	AA+/A-1+/Stable	Affirmed
Ohio GO VRDBs		
Long Term Rating	AA+/A-1+/Stable	Affirmed
Ohio (Administrative Bldg Fd Projs) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio (Adult Correctional Bldg Fd Projs) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio (Adult Correctional Bldg Fd Proj) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio (Adult Correctional Bldg Fd Proj) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio (Cultural & Sports Facs Bldg Fd Projs) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio (Juvenile Correctional Building Fnd Projs) APPROP		
Long Term Rating	AA/Stable	Affirmed

Ratings Detail (As Of October 29, 2019) (cont.)		
Ohio (Juv Correctional Bldg Fd Projs) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio (Mental Health Facs Imp Fd Projs) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio (Mental Hlth Facs Imp Fnd Projs) APPROP		
Long Term Rating	AA/Stable	Affirmed
Columbus-Franklin Cnty Fin Auth, Ohio		
State of Ohio, Ohio		
Columbus-Franklin Cnty Fin Auth (Ohio) APPROP		
Long Term Rating	AA-/Stable	Affirmed
Columbus-Franklin Cnty Fin Auth (Ohio) APPROP		
Long Term Rating	AA-/Stable	Affirmed
Columbus-Franklin Cnty Fin Auth (Ohio) APPROP		
Long Term Rating	AA-/Stable	Affirmed
Ohio Bldg Auth, Ohio		
State of Ohio, Ohio		
Ohio Bldg Auth (Ohio) admin bldg APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio Bldg Auth (Ohio) adult correctional APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio Bldg Auth (Ohio) highway safety APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio Bldg Auth (Ohio) juvenile correctional APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio Bldg Auth (Ohio) (Admin Bldg Fd Projs) st facs		
Unenhanced Rating	AA(SPUR)/Stable	Affirmed
Ohio Bldg Auth (Ohio) (Adult Correctional Bldg Fd Projs) st facs		
Unenhanced Rating	AA(SPUR)/Stable	Affirmed
Ohio Dept of Admin Svc, Ohio		
State of Ohio, Ohio		
Ohio Dept of Adim Svcs (Ohio) (Multi-Agy Radio Comm) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio Dept of Admin Svc (Ohio) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio Dept of Admin Svc (Ohio) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio Dept of Admin Svc (Ohio) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio Dept of Admin Svc (Ohio) (Administrative Knowledge Sys) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio Dept of Admin Svc (Ohio) (Bureau of Criminal Investigation Records) APPROP		
Long Term Rating	AA/Stable	Affirmed

Ratings Detail (As Of October 29, 2019) (cont.)		
Ohio Dept of Admin Svc (Ohio) (Enterprise Data Center Solutions) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio Dept of Admin Svc (Ohio) (State Taxation Accounting) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio Dept of Admin Svc (State of Ohio) (Enterprise Data Ctr Solutions)		
Long Term Rating	AA/Stable	Affirmed
Ohio Dept of Admin Svc (State of Ohio) (Voting Sys Acquisition) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio Pub Facs Comm, Ohio		
State of Ohio, Ohio		
Ohio Pub Facs Comm (Ohio)		
Long Term Rating	AA+/Stable	Affirmed
Ohio Pub Facs Comm (Ohio)		
Long Term Rating	AA+/Stable	Affirmed
Ohio Pub Facs Comm (Ohio)		
Long Term Rating	AA+/Stable	Affirmed
Ohio Pub Facs Comm (Ohio) GO		
Long Term Rating	AA+/Stable	Affirmed
Ohio Pub Facs Comm (Ohio) GO		
Long Term Rating	AA+/Stable	Affirmed
Ohio Pub Facs Comm (Ohio) GO		
Long Term Rating	AA+/Stable	Affirmed
Ohio Pub Facs Comm (Ohio) GO		
Long Term Rating	AA+/Stable	Affirmed
Ohio Pub Facs Comm (Ohio) GO		
Long Term Rating	AA+/Stable	Affirmed
Ohio Pub Facs Comm (Ohio) GO		
Long Term Rating	AA+/Stable	Affirmed
Ohio Pub Facs Comm (Ohio) GO		
Long Term Rating	AA+/Stable	Affirmed
Ohio Pub Facs Comm (Ohio) GO		
Long Term Rating	AA+/Stable	Affirmed
Ohio Pub Facs Comm (Ohio) GO VRDBs		
Long Term Rating	AA+/A-1+/Stable	Affirmed
Ohio Pub Facs Comm (Ohio) GO		
Long Term Rating	AA+/Stable	Affirmed
Ohio State Treasurer, Ohio		
State of Ohio, Ohio		
Ohio St Treasurer (Ohio) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio St Treasurer (Ohio) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio St Treasurer (Ohio) APPROP		
Long Term Rating	AA/Stable	Affirmed

Ratings Detail (As Of October 29, 2019) (cont.)		
Ohio St Treasurer (Ohio) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio St Treasurer (Ohio) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio St Treasurer (Ohio) APPROP		
Long Term Rating	AA/A-1+/Stable	Affirmed
Ohio St Treasurer (Ohio) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio St Treasurer (Ohio) (Admin Bldg Fd Proj) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio St Treasurer (Ohio) (Admin Bldg Fd Proj) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio St Treasurer (Ohio) (Adult Correctional Bldg Fd Projs) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio St Treasurer (Ohio) (Adult Correctional Bldg Fd Proj) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio St Treasurer (Ohio) (Adult Correctional Bldg Fd Proj) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio St Treasurer (Ohio) (Cultural & Sports Facs Bldg Fd Projs)		
Long Term Rating	AA/Stable	Affirmed
Ohio St Treasurer (Ohio) (Juvenile Correctional Bldg Fd Projs) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio St Treasurer (Ohio) (Juvenile Correctional Bldg Fd Projs) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio St Treasurer (Ohio) (Mental Hlth Facs Imp Fd Proj) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio St Treasurer (Ohio) (Mental Hlth Facs Imp Proj) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio St Treasurer (Ohio) (Mental Hlth Fac Imp Fd Proj) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio St Treasurer (Ohio) (Pks & Rec Imp Fd Projs) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio St Treasurer (Ohio) (Pks & Rec Imp Fd Proj) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio St Treasurer (Ohio) (Transp Bldg Fnd Projs) APPROP		
Long Term Rating	AA/Stable	Affirmed
Ohio St Treasurer (Ohio) (Treasury Mgmt Sys Proj) APPROP		
Long Term Rating	AA/Stable	Affirmed

Many issues are enhanced by bond insurance.