S&P Global
Ratings

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Connecticut; Appropriations; Gas Tax; General Obligation; General Obligation Equivalent Security; Moral Obligation

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Credit Profile		
US$600.0 mil GO bnds ser 2019 A due 04/15/2039		
Long Term Rating	A/Positive	New
US$250.0 mil Taxable GO bnds ser 2019 A due 04/15/2029		
Long Term Rating	A/Positive	New
Connecticut GASTAX		
Long Term Rating	A+/Positive	Affirmed
Connecticut GO		
Long Term Rating	A/Positive	Affirmed
Connecticut GO		
Long Term Rating	A/Positive	Affirmed
Connecticut taxable GO (AGM) (SEC MKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO		
Long Term Rating	A/A-1/Positive	Outlook Revised
Capital Region Development Authority, Connecticut		
Connecticut		
Capital City Economic Dev Auth (Connecticut) GOEQUIV		
Long Term Rating	A/A-1/Positive	Outlook Revised

Rationale

S&P Global Ratings has revised its outlook on the State of Connecticut to positive from stable and affirmed its 'A' rating on approximately $18.3 billion of the state's general obligation (GO) bonds outstanding, its 'A-' rating on state appropriation-backed debt, and its 'BBB' rating on the state moral obligation debt. At the same time, S&P Global Ratings has assigned its 'A' rating to Connecticut's $600 million general obligation (GO) bonds, 2019 series A, and $250 million taxable GO bonds, 2019 series A. The outlook on the bonds is positive.

We have also revised our outlook on Connecticut's special tax obligation transportation fund secured debt, to positive from stable, and affirmed our 'A+' rating on the debt, which under our priority-lien criteria is limited to one notch above our GO rating.

The outlook change to positive reflects the increased likelihood that Connecticut will preserve recently replenished reserves at what we view as strong levels, and that the state's high debt levels could moderate if the governor's proposal for a new "debt diet" is carried through into policy. Currently, Connecticut remains the only state with a high enough debt load to trigger a one-notch downward override rating adjustment under our state rating methodology.

During our two-year outlook horizon we could raise the state GO rating if we believe Connecticut's currently high debt level might moderate; or if we believe the state will retain currently high budget reserves through the next fiscal 2020-2021 biennium. Newly elected Gov. Ned Lamont has proposed a budget that adds to existing reserves, but for the legislature to adopt such a budget might require politically unpalatable measures, such as reductions in aid to local governments. We calculate the fiscal 2020 budget gap, which needs to be closed at 7.9% of expenditures, could potentially fall to a more moderate 3.1% gap if the state keeps existing tax policies from expiring. The state projects fiscal 2021's gap at a level we calculate at 5.7% if the state keeps existing tax policies, and 10.9% if it does not. We also believe federal tax reform's disallowance of state and local tax deductions could disproportionately affect states with highly progressive income taxes and a concentration of top taxpayers, such as Connecticut, so as to create increased uncertainty forecasting income tax collections this year, as indicated by recent monthly tax shortfalls that California, New Jersey, and New York have experienced.

State GO bond covenants imposed last year require revenue above a volatility cap to be set aside into reserves. The state estimates these one-time revenues will boost reserves to an estimated 10.2% of general fund expenditures at fiscal year-end 2019. Previously, Connecticut had a history of carrying low reserves, and ended fiscal 2017 with a reserve of only 1.2% of expenditures. Bond covenants allow reserve drawdowns upon a supermajority legislative vote, which the majority party holds at present. Our positive outlook anticipates at least a one-in-three possibility that the state could retain high reserves through the upcoming biennium, or that future debt issuance could be substantially reduced.

The GO rating on Connecticut reflects our view of the following factors:

- The state's high income levels;
- A diverse economy;
- Active monitoring of revenues and expenditures to identify and correct midyear budget gaps, as exemplified by midyear budget adjustments made in fiscal years 2015, 2016, 2017, and 2018;
- An increase in budget reserves from a low 1.2% of expenditures at fiscal year-end 2017, to a good 6.2% of expenditures in fiscal year-end 2018, and a projected 10.2% at fiscal year-end 2019;
- Recently implemented bond covenants that for five years will require the state to budget slightly less than forecast revenue, limit GO debt issuance, and place income tax receipts above the volatility cap into reserves; and
- Adequate operating liquidity, despite negative generally accepted accounting principles (GAAP) general fund balances.

Offsetting factors, in our opinion, include:

- High debt, high unfunded pension liabilities, and large unfunded other postemployment benefit (OPEB) liabilities, all of which create what we believe are significant and growing fixed-cost pressures that restrain Connecticut's budgetary flexibility, as evidenced by a four-month delay in enacting the fiscal 2018-2019 biennium budget.
- Connecticut had the second-highest combined debt, pension, and OPEB liabilities of all the states in fiscal 2017, as well as individually the highest tax-backed debt to gross state product (GSP). It is the only state that has triggered a one-notch rating override reduction in our state rating model due to high debt.

- High fixed costs, which could pose a major impediment to solving future budget gaps in the event of a recession--combined debt service, pension, OPEB, Medicaid, and other entitlement costs comprised 49% of Connecticut's fiscal 2019 budgeted expenditures.
- At the same time, the state has been funding full annual actuarially determined contributions (ADC) to its retirement systems and is partially prefunding an OPEB trust fund, helping hold down the pace of projected future cost increases.

Other offsetting factors include:

- Annual population declines each year since 2013, and slow economic growth, exacerbated by job losses in the state's well-paying financial sector, which is expected to contribute to weak revenue growth over the next several years and lead to difficult budget-balancing decisions beyond the current biennium as pension costs rise. The state is one of only a few that has not fully recovered all of the jobs lost since the last recession, having recovered 94% of employment through December 2018; and
- A history of cyclical budget performance and low budget reserves before fiscal 2018.

Connecticut's revenue volatility cap under its new bond covenants, and windfall income tax as the result of taxpayer behavior to federal tax reform, has raised the state's budget reserves from chronically low levels to a strong position. The state estimates its budget reserve will rise to a strong 10.2% of expenditures at fiscal year-end 2019 from a low 1.2% at fiscal year-end 2017. The volatility cap transfers income tax revenue of more than $3.15 billion (adjusted annually by the five-year growth in personal inome) to the state's budget reserve fund. The segregation of revenue was designed to capture an expected one-time windfall from federal tax reform and shield Connecticut from historically cyclical income taxes.

However, diversion of revenue above the volatility cap has also gives the state a budgetary cushion, in that if income tax comes in below forecast levels, no adjustment to ongoing spending is needed, as long as income tax remains above the cap amount. Bond covenants also require the state to budget for slightly less than full forecast revenues, apart from the volatility cap, providing further revenue cushion. These bond covenants, in place for five years, or longer if statutory law is not changed, help shield Connecticut's cyclical revenue streams. Cyclical revenue is partially the result of dependence on the financial industry and top taxpayers that derive a significant portion of their income from capital gains. In tax year 2017, those making a million dollars or more a year comprised only 0.7% of taxpayers, but contributed 35.3% of state income tax revenue. In fiscal 2020, Connecticut projects tax revenue to come in at $377 million above combined revenue caps, or 1.9% of forecast revenue.

Gov. Lamont's proposed fiscal 2020-2021 biennium budget would fully retain reserves, which would build up to 14.1% of expenditures by fiscal year-end 2021, and the governor has stated opposition to using supermajority legislative provisions to make even small draws on the reserve in the next biennium. His budget proposal would close projected budget gaps by making permanent temporary tax measures enacted in the previous biennium, such as a business surtax and a portion of a hospital providers tax, and by broadening the sales tax base to a number of services, while also adding certain new taxes, such as on sugary drinks and plastic bags, and an increasing the lodging tax rate. The new governor also proposes to have non-distressed cities and towns, which are responsible for kindergarten to grade 12 (K-12) education, pick up 25% of teacher retirement fund normal costs. A similar larger cut in local aid for teacher

contributions that the previous governor proposed was rejected by the legislature in the current biennium budget. In addition, the governor is looking to negotiate new labor savings, which could be difficult to achieve in view of the long length of the current labor contracts, and expects substantial near-term budget savings from pushing out the amortization of the teachers' retirement system unfunded liabilities.

The state projects a budget gap of $1.5 billion in fiscal 2020, or what we calculate as 7.9% of projected expenditures before suggested budget cuts, and a gap of $2.2 billion in fiscal 2021, or 10.9%. These gaps are calculated after segregating amounts above Connecticut's revenue caps to the budget reserve. It is interesting to note that the fiscal 2020 budget gap would shrink to what we calculate as only about 1% of baseline expenditures if the state maintained existing tax and spending policies and used the revenue forecast above the revenue cap of $377 million for spending instead of further increasing reserves.

Of the $1.5 billion fiscal 2020 projected total budget gap, $927.2 million, or 4.7% of expenditures, would be solved in the governor's budget proposal by maintaining current biennium tax policy. The governor proposed closing the remaining $617.1 million gap in 2020 with an assortment of small measures. Various revenue proposals include increasing the sales and use tax as a result of broadening the tax base to certain services and eliminating several exemptions, totaling $371 million in 2020 and $652.6 million in 2021; a proposed tax on sugary beverages that would bring in $163.1 million in fiscal 2021; $516 million in both 2020 and 2021 from maintaining a hospital user fee; and $60 million in 2020 and $37.5 million in 2021 from maintaining a 10% business surtax surcharge; also included are a large number of other measures, none of which involves broad changes in sales or income tax rates. These increased revenues are offset by reductions in certain federal revenues and one-time funds. Proposed pension reform, primarily a proposal to push out amortization of the teachers' retirement system unfunded liabilities for 30 years and lower the system's assumed rate of return to 6.9% from 8.0%, would save the state $183.4 million in fiscal 2020 from current contribution levels, and $183.4 million in 2021. The proposal for localities to pick up 25% of the normal cost of teacher pension costs amounts to only a modest $49.2 million in fiscal 2021 and $71.5 million by 2022, but could grow over time. All pension proposals combined together would save the state $315.3 million in 2021, or 1.6% of baseline expenditures. The governor proposes a substantial reduction in annual debt issuance, but these savings would largely accrue to future bienniums.

Overall, because of the volatility cap and new strictures to budget only 99.50% of forecast revenue in fiscal 2020 and 99.25% in fiscal 2021, total general fund revenue is projected to increase only 1.1% in fiscal 2020 and 3.2% in fiscal 2021, balanced against expenditure increases of 1.6% in fiscal 2020 and 3.2% in fiscal 2021. The state is forecasting an economic growth rate for the sales and use tax of 2.7% in fiscal 2020 and 2.4% in 2021, and 2.7% and 2.2% for income tax withholding, in those fiscal years respectively, as well as a decline of 8.4% in 2020 and growth of 2.7% in fiscal 2021 in income tax estimates and finals, which picks up capital gains tax. We think this is reasonable in view of IHS Markit's forecast for state personal income growth of 3.4% in calendar 2019, 3.4% in calendar 2020, and 3.5% in calendar 2021.

Connecticut enacted a bi-partisan 2018-2019 biennium budget four months late into the fiscal year that began July 1, 2017. The delay arose from a need to close large budget gaps resulting from a combination of weak income tax revenue growth; increased pension, OPEB, and Medicaid costs; and a resistance in the legislature to additional tax

increases after several rounds of tax hikes in preceding bienniums. The 2018 general fund budget gap originally totaled 13% of projected revenue because of slow economic growth before budget-closing actions. The state ended up running a general fund operating deficit in fiscal 2018 of 2.6% of expenditures, but due to excess volatility cap revenues, held apart from the general fund, increased its budget reserve fund to a good 6.3% of expenditures at fiscal year-end 2018, up from 1.2% at fiscal year-end 2017.

Early in the current 2018-2019 biennium the state forecast an operating deficit and made a small midbiennium budget adjustment in May 2018. However, recent income tax receipts have come in above budget, and Connecticut expects to end fiscal 2019 with a $516.1 million operating surplus, or 2.7% of expenditures, which with an additional $648 million of excess volatility cap revenue, would combine to add $1.2 billion in reserves and bring the state's total budget reserve up to $2.3 billion at fiscal year-end 2019, or 10.4% of expenditures.

Out-year deficits still loom. The state projects out-year general fund deficits of $384.2 million in fiscal 2022, $754.1 million in 2023, and $990.5 million in 2024, although these will shrink somewhat if the governor's proposal to maintain current tax policies is enacted into law. If that occurs with the governor's other proposals, the state estimates that there will be no one-time revenue items at all in the 2021-2022 biennium budget.

While the state's budget picture has brightened considerably in the past year following a pickup in economic growth, our concern remains regarding a potential cyclical peak. Connecticut has reduced its flexibility to raise tax rates following tax increases in each of the last several biennium budgets, while high fixed costs limit the ability to reduce expenditures should another recession occur.

The state calculates $5.4 billion of combined general fund fixed costs for debt service, pension, and OPEB in fiscal 2019, totaling a sizable 29% of estimated general fund expenditures, with a small part of this representing additional deposits to an OPEB trust fund ($91 million of such deposits were made in 2018). Adding in $2.6 billion of 2019 Medicaid payments brings fixed costs up to 42% of 2019 expenditures. In addition, adding $1.3 billion of other entitlement account spending reported by the state brings the total 2019 fixed cost percent up to 49%. In our view, fixed costs are high and could potentially squeeze remaining unrestricted budget areas such as local aid, higher education, and to a lesser extent transportation, in the event of future budget gaps.

A pension agreement with the state employee union in 2016 has helped control fixed cost growth by smoothing out what would have been a potential spike in pension payments over the next few years and pushing amortization of some unfunded pension liabilities payments into later years. At the same time, it lowered the state employees' retirement system assumed rate of return to a more conservative 6.9% from 8.0% (see "Connecticut's Recent Pension Agreement With Unions Could Be Mildly Positive For The State," published Jan. 23, 2017, on RatingsDirect). The state has now proposed similarly changing the teachers' retirement system by amortizing unfunded liabilities over 30 years and dropping the return assumption to a more conservative 6.9%. The state attorney general has opined that this will not contravene outstanding pension bond covenants if the state adds a new reserve fund to the bond issue, as proposed. We believe that the small $183 million drop in annual state contributions as a result of the teachers' retirement fund changes will be relatively minor, while the proposed phase-in to level dollar funding after a number of years could eventually help stabilize growth in the pension contributions. The state continues to fully fund its pension funds' annual ADC.

Connecticut made statutory changes in certain financial practices in the current biennium that will more rigidly control spending and bonding, as well as added a spending cap to the state constitution. The state has additionally locked these practices into place for the next five years through recent bond covenants. By using bond covenants, the ability to change these procedures is taken out of the hands of future legislatures. This could help credit quality to the extent structural balance were enhanced and reserve balances were preserved during good economic times, but could potentially squeeze discretionary spending if fixed costs continue to escalate (see "Could Connecticut's Proposed Bond Covenants Lead The Way To A New Financial Management Tool For Other U.S. States?", published March 28, 2018). Overall, we see the restrictions as likely beneficial to credit quality, assuming budget economic forecasting is accurate. The constitutional spending cap limits expenditure growth to the greater of the percent increase in personal income over a five-year period, or the percent increase in inflation over the previous calendar year, unless overridden by the governor and three-fifths of the legislature. The bond covenants include budgeting for only 99.5% of forecast revenues in fiscal 2020, with a phase down to 98.0% of revenue by 2026, transferring certain annual income tax revenue above $3.15 billion (adjusted yearly for economic growth) to the budget reserve, and implementation of various bond caps, unless the governor and three-fifths of the legislature declare a financial emergency. Statutory law also now limits use of the budget reserve to instances when revenues are forecast to decline 1% or more, or if the budget reserve equals 5% or more of current-year appropriations, for the purpose of paying the unfunded past service liability of the employees' and teachers' pension systems in excess of regular contributions. By making budget reserve drawdowns more difficult, balances might more likely be preserved for recessionary periods, which if actually demonstrated could potentially improve credit quality.

On a GAAP basis, the state showed a positive general fund balance in fiscal 2018, the most recent audited year, after a long period of chronic negative fund balances. At fiscal year-end June 30, 2018, the state had a positive total general fund balance of $1.15 billion, or 5.6% of expenditures. The combined budget reserve and unassigned general fund balance totaled $960 million, or 4.6%. This contrasts to a total general fund balance of negative $494 million at the end of fiscal 2017, or 2.6% of expenditures and transfers out, and a larger deficit fund balance of negative $614 million, or 3.3% at fiscal year-end 2016.

The state still ranks first in per capita income at 139% of that of the U.S. in 2017, although down from 153% in 2010. The economy continues to grow, despite continuous small population declines each year since 2013, based on recently revised census data. In 2018, state population decreased 0.03% to 3.57 million. Connecticut has regained about 94% of the jobs lost in the last recession. IHS Markit forecasts real GSP growth of 1.5% in 2019, and 1.4% in 2020, below that of the nation. Job losses in the well-paying financial sector have contributed to revenue weakness, but the remaining above-average proportion of jobs in this sector still represents a wealthy tax base, and financial sector employment started to grow slowly again in 2017. State defense industries could also do well if federal defense spending escalates.

At the same time, we view Connecticut's long-term liabilities as high and growing. We calculate fiscal year-end 2018 tax-backed debt at 9.4% of 2017 personal income (more than one-third higher than our '4' threshold of 7.0%). We calculate fiscal year-end 2018 tax-backed debt per capita at $6,810 (more than one-third higher than our '4' threshold of $3,500), and tax-backed debt service-to-governmental funds spending at 15.3% (more than one-third higher than our '4' threshold of 10.0%). Our other debt ratios include debt-to-gross product (9.2% using the most recent 2017 gross

product figure), and the 10-year total tax-backed debt amortization ratio, which is considered good at 68%. Under our state rating criteria, when a majority of our debt ratios are one-third or more above our threshold for a scoring of '4', our criteria adds an extra one-notch downward adjustment to our overall indicative state rating score. The high debt override threshold was first met in fiscal year-end 2017, before Connecticut's assumption of the city of Hartford's $540 million of debt and large issuances incorporated into our 2018 debt calculations. The governor has proposed issuing an annual average of $1.7 billion of combined GO and transportation tax-supported debt in the coming biennium, compared with an average of $2.4 billion in fiscal years 2012-2019, under his debt diet proposal, which could begin to materially reduce future debt levels if continued past the next biennium.

Unfunded pension liabilities are also high at 14% of personal income on a 2018 Governmental Accounting Standards Board (GASB) 67 basis, while the state's combined pension-funded ratio on a GASB basis is low at 45%, despite annual funding of the ADC. We view Connecticut's combined state employee and teacher net OPEB liability as high at $19.9 billion, or 7.7% of personal income, although it has declined and stabilized in recent years due to partial funding of an OPEB trust fund. However, state debt and pension ratios are approaching levels that could each trigger a one-notch downgrade under our state rating criteria.

Based on the analytic factors we evaluate for states, on a scale of '1.0' (strongest) to '4.0' (weakest), we have assigned a composite score of '2.2' to Connecticut, indicative of an 'AA-' rating. However, we also calculate that a majority of Connecticut's debt ratios in our state scoring criteria lie more than one-third above the level necessary to score a '4', which triggers a one-notch rating override under our state scoring criteria, for an indicative rating of 'A+'. We are further using our discretionary ability to rate one notch below the indicative rating and maintain our 'A' rating, while revising the outlook to positive, in that if reserve levels are not maintained at current elevated levels in the final enacted budget and into the new biennium, the indicative rating score could fall back 'A'.

Outlook

Our positive outlook reflects the increased likelihood that Connecticut will preserve recently replenished reserves at what we view as strong levels, and that the state's high debt levels could moderate if the governor's proposal for a new debt diet is carried through into policy.

Currently, Connecticut remains the only state with a high enough debt load to trigger a one-notch downward override rating adjustment under our state rating methodology. During our two-year outlook horizon we could raise the state GO rating if we believe Connecticut's currently high debt level might no longer reach our override threshold, or if we believe the state will retain currently high budget reserves through the next fiscal 2020-2021 biennium. The governor has proposed a budget that adds to existing reserves, but doing so in the final adopted budget might require politically unpalatable measures, such as reductions in local aid. We calculate the fiscal 2020 budget gap of 7.9% of expenditures could potentially fall to a smaller 3.1% gap if the state keeps existing policies and tax rates from expiring, while fiscal 2021's gap is 10.9%, which would fall to 5.7% if existing tax policies were maintained. We also believe the effect of federal tax reform's disallowance of state and local tax deductions on states such as Connecticut, which have highly progressive income taxes and a concentration of top taxpayers, has created increased uncertainty forecasting this year's income tax collections, as indicated by recent monthly tax shortfalls that California, New Jersey, and New York

have experienced.

State GO bond covenants imposed last year require revenue above a volatility cap to be set aside into reserves. Connecticut estimates these one-time revenues will boost reserves to an estimated 10.4% of general fund expenditures at fiscal year-end 2019. Previously, the state had a history of carrying low reserves, and ended fiscal 2017 with a reserve of only 1.2% of expenditures. Bond covenants still allow reserve drawdowns upon a supermajority legislative vote, which the majority party holds at present. Our positive outlook anticipates at least a one-in-three possibility that Connecticut could retain high reserves through the upcoming biennium, despite weak revenue and demographic trends, or that future debt issuance could be substantially reduced.

The outlook also assumes that while proposed changes to the teachers' retirement system may push out amortization of unfunded liabilities, the state will continue to make full revised ADC payments and continue to show structural budget balance during this current period of economic growth. Should reserve levels drop to low levels during a period of economic growth, or significant one-time budget balancing measures find their way into the upcoming biennium budget, so as to create material structural imbalances, we could revise our outlook to stable. Another event that could cause us to revise the outlook or lower the rating would be significant budgetary stress due to an unexpected economic recession, in view of Connecticut's high fixed costs.

We believe that the majority of our debt ratios will remain at least one-third higher than the threshold triggering our one-notch lower rating over our two-year outlook horizon. This threshold was first triggered at the end of fiscal 2017. The subsequent state assumption of Hartford's GO debt and additional state GO and transportation tax- supported issuances caused state debt levels to rise even further by the end of fiscal 2018. However, we could still remove this override adjustment during our two-year outlook period if we believed the governor's proposal to shrink future debt issuance might be adhered to over the long run and bring state debt levels below our override threshold at some point in the future. The governor's proposal to implement new highway tolling could provide a non-tax revenue source to support Connecticut's significant transportation capital needs.

Government Framework

The government framework--including fiscal policy and intergovernmental funding within which each state taxes, spends, and issues debt--influences Connecticut's ability to manage through economic cycles.

A key feature of Connecticut's governmental framework is a balanced budget requirement. The state constitution provides that the amount of general budget expenditures authorized in any fiscal year shall not exceed the estimated amount of revenue for that fiscal year. In developing its budget, Connecticut operates under a constitutional expenditure cap that limits spending growth to the greater of personal income growth or the inflation rate, unless the governor declares a state of emergency, or three-fifths of each house of the legislature votes to exceed the limit due to extraordinary circumstances. The expenditure cap excludes debt service, payments from federal grants, and matching payments, while certain pension costs are phased in under the cap in stages beginning in 2024. There is no statutory or constitutional prohibition against borrowing for operating purposes, and the state has done so in the past. Connecticut is authorized to issue GO debt, special tax obligation debt, and special obligation and revenue debt. Debt outstanding,

authorized and payable from the general fund, is limited by statute to 1.6x total general fund tax receipts. Cancellation of debt authorization must be considered by state statute when Connecticut's debt approaches 90% of the state debt limit.

There are no constitutional or statutory provisions providing for, or precluding, a priority of payment for GO debt service over other claims of the state. Funds for debt service are deemed to be appropriated and, as part of the contract between bondholders and Connecticut, the state must appropriate all amounts necessary for the punctual payment of principal and interest.

Connecticut, which is not a voter-initiative state, has the autonomy to raise taxes and has adjusted its tax structure over time. It has relatively broad service responsibilities with about 27% of 2018 budgetary expenditures tied to education funding and other resources shared with local government units. Although it has legal flexibility to adjust funding to local governments, we believe it might be politically difficult to make large municipal aid cuts, in light of the recent four-month budget impasse following large proposed cuts in municipal aid by the previous governor. The state has previously avoided sharp midyear reductions in these areas in recent years. (In Connecticut, municipalities are in charge of K-12 education.)

As part of the fiscal 2018-2019 biennium budget, Connecticut is required to put certain current statutory spending limitations into bond covenants for GO bonds sold after May 15, 2018. The covenants are in place until July 1, 2023, as an essentially unbreakable contractual obligation. These provisions include budgeting for only 99.5% of forecast revenues in fiscal 2020, transferring a new business pass-through tax, and certain annual income tax revenue above $3.15 billion (adjusted annually for inflation), to the budget reserve, and various bonding caps, unless the governor and three-fifths of the legislature declare a financial emergency.

New statutory law also limits use of the budget reserve to instances when revenues are forecast to decline 1% or more, or if the budget reserve equals 5% or more of current year appropriations of the amount in excess of the 5% for the payment of unfunded past service liability of the employees' and teachers' pension systems, which are in excess of regular contributions.

On a scale from '1.0' (strongest) to '4.0' (weakest), S&P Global Ratings assigned a '1.9' score to Connecticut's governmental framework.

Financial Management

Financial Management Assessment: Strong

State statutes and internally developed policies guide budget management, long-term financial planning, capital planning, debt management, and investing.

We consider Connecticut's management practices strong under our Financial Management Assessment (FMA) methodology. An FMA of strong indicates that, in our opinion, practices are robust, well embedded, and likely sustainable.

Beginning Oct. 15, 2009, the Office of Policy and Management (OPM) and the legislature's Office of Fiscal Analysis

(OFA) have been required by statute to issue consensus revenue estimates each year. An update to the estimate is required by Nov. 10, Jan. 15, and April 30, of each year, and must cover a five-year period. In addition to its internal resources, Connecticut bases its revenue estimates for budget forecasting on a number of outside data sources and economic forecasting firms. The state's long-term financial planning includes a three-year forecast for the legislature in addition to the biennial budget. The financial plan is updated annually and submitted to the legislature by Nov. 15.

Connecticut also produces a five-year capital improvement plan as part of the November update. State statutes require monthly revenue and expenditure forecasts measured against the budget. The OPM and the Office of the Comptroller generate monthly reports projecting year-end surpluses or deficits. State statutes also prescribe investment of state funds. Dedicated staff monitors investments and generates monthly reports. Connecticut also holds at least quarterly meetings with the investment advisory commission. The state has a swap management policy and other debt policies that guide amortization and issuance. Connecticut statute authorizes a budgetary reserve fund at a maximum of 15% of general fund appropriations. State statutes prescribe that all unappropriated general fund surpluses must be transferred into the state's budget reserve fund, and that the fund can only be drawn on to fund operating deficits. Before 2018, and the imposition of bond covenants mandating revenues above its volatility cap to go into the reserve, the state typically held low reserves for consecutive years despite the economic recovery. The budgetary reserve was at 1.2% of expenditures at the end of fiscal 2017. However, the volatility cap and acceleration of one-time income tax revenue into tax year 2018 helped boost the reserve to 6.3% of expenditures at fiscal year-end 2018 and the state estimates it will rise to 10.4% at fiscal year-end 2019.

Budget Management Framework

Connecticut maintains a formal schedule for updating revenues and expenditures on a monthly basis, and this is done by both OPM and the comptroller. If the comptroller reports a projected general fund deficit of greater than 1%, the governor is required to file a deficit mitigation plan. Although the governor might reduce appropriations, this is limited to 5% of total appropriations and 3% of any fund, with any additional reductions requiring legislative approval. Legislative deliberation relating to interim budget adjustments has contributed to a delay in addressing budget gaps at times. The state is allowed to end the year in a deficit position, which has periodically been addressed with deficit bonds. However, statutory provisions provide that any new budget deficit after fiscal 2013 must be funded in the budget of the year following the next fiscal year (when the magnitude of the previous budget deficit has become fully known). Gap-closing solutions in previous bienniums have relied on significant nonrecurring measures and structural solutions.

On a scale from '1.0' (strongest) to '4.0' (weakest), S&P Global Ratings assigned a score of '1.5' to Connecticut's financial management.

Economy

Connecticut has lost population each year since 2013, with a 0.6% total decline during this period, to 3.57 million in 2018. State population growth has been below the U.S. over the past 10 years, according to the U.S. Census Bureau.

However, the state's age dependency ratio of nonworking age population-to-total population of 59.8% was slightly better than that of the nation's 61.8% in 2017.

The state's per capita personal income of $71,823 in 2017 was the highest in the nation, although it has declined from 153% of the U.S. in 2010 to a still high 139% in 2017 because of slow economic growth. However, GDP growth has been below that of the U.S. for some time. One-, five-, and 10-year compound annual state real GSP growth rates were negative 1.13%, 0.40%, and 0.88%, respectively, compared with positive 2.22%, 2.19%, and 1.45%, respectively, for the nation. Connecticut also experienced greater decline in GSP than national GDP during the recession, although annual growth was stronger than that of the U.S. in 2007 and in 2006 before the recession.

Connecticut's average seasonally adjusted unemployment rate in 2018 was 4.1% versus 3.9% for the U.S., according to the federal Bureau of Labor Statistics (BLS). We believe the state's economy exhibits some moderate cyclicality due to exposure to the financial sector. IHS Markit has reported that the state's important financial industry, with its well-paying jobs, shrank every year from 2008 through 2017, except for a small increase in 2015. However, it also reports that financial industry hiring jumped 2.0% in the first quarter of 2018, while manufacturing and education and health services also saw strong growth in the first quarter of 2018, a possible sign of a turnaround after slow economic growth since the last recession. In 2017, the well-paying financial activities sector comprised 7.6% of state payroll employment, compared with 5.7% for the nation, according to the BLS.

Other major sectors include education and health services (19.9% for the state compared with 15.8% for the U.S.); trade, transportation, and utilities (17.7% for the state, 18.8% for the U.S.); government (13.8% for the state, 15.5% for the U.S.); professional and business services (13.0% for the state, 13.9% for the U.S.); and manufacturing (9.5% for the state, 8.5% for the U.S). Key employers include Sikorsky Aircraft Corp., Electric Boat (maker of nuclear submarines), Pratt & Whitney, Yale University, and Foxwoods Resort Casino, as well as insurance companies and financial sector firms. Jackson Laboratories agreed to build a $1.1 billion research facility in 2011. In recent years, General Electric moved its headquarters to Boston, while Aetna Inc. announced a move of its headquarters from Hartford to New York City, which it later rescinded.

IHS Markit forecasts real GSP growth of 1.5% in calendar 2019, 1.4% in calendar 2020, and 1.3% in calendar 2021, compared to forecast national real GDP growth of 2.4% in calendar 2019, 2.0% in calendar 2020, and 1.7% in calendar 2021. IHS Markit projects state nominal personal income growth of 3.4% in 2019, 3.4% in 2020, and 3.5% in 2021. Previous revenue shortfalls against biennium budgets in recent years were attributable in part to a downsizing in Connecticut's forecast total personal income tax (PIT) growth rate and capital gains tax among wealthy individuals.

On a scale from '1.0' (strongest) to '4.0' (weakest), S&P Global Ratings assigned a '2.2' to Connecticut's economy.

Budgetary Performance

State statutes create what we view as a favorable budget reserve fund structure from a legal standpoint, although Connecticut has had a history of drawing reserves down to what we view as minimal levels between cyclical high points, as well as issuing deficit bonds during recessions. The budget reserve stood at 1.3% of general fund budgetary expenditures in 2016 and 1.2% in 2017, before increasing to 6.3% in 2018, and an estimated 10.4% in 2019 as bond

financial covenants and new budgeting law kicked in (see table).

In fiscal 2017, the state had to make $164 million of midyear budget corrections, primarily due to weak income tax growth in capital gains, an ended afterward with a small $22.7 million operating deficit (not including excess volatility cap revenue), which was covered by a transfer from the state's budget stabilization fund (BSF).

In the early part of the current 2018-2019 biennium, Connecticut again projected a substantial biennium end deficit and again made a midyear budget adjustment, in May 2018. However, a pick-up in the state economy has since caused Connecticut to project a $516.1 million operating surplus in fiscal 2019, or 2.7% of expenditures. The state projects that the budget reserve will be built up to $1.97 billion at fiscal year-end 2019, or what we consider a strong 10.4% of expenditures due to diversion of volatility cap excess income tax revenue, much of which the state considers one-time revenue because of changes in taxpayer behavior as the result of federal tax reform. However, the state is projecting a continued amount of income tax above its volatility cap in fiscal 2020, albeit smaller in amount compared with fiscal 2019.

Connecticut originally estimated it would need to close a fiscal 2018 general fund budget gap of about 13% of revenues before budget-closing actions, including a new labor agreement that postponed raises to the 2020-2021 biennium, prohibits employee layoffs through fiscal 2021, and locked in 3.5% salary increases in each of fiscal years 2020 and 2021, although the state can still somewhat reduce labor costs through attrition.

State statutes authorize the BSF's maximum level at 15% of general fund appropriations (raised from 10% in the last legislative session). However, at fiscal year-end 2017, the BSF held an amount equal to about 1.2% of 2017 general fund spending, and we believe there is a significant possibility that the governing party in the legislature could choose to exercise its current supermajority status to override bond covenants and partially draw down reserves in the enacted 2020-2021 budget, or choose to use reserves in the event of renewed midbiennium revenue weakness.

We consider Connecticut's liquidity good. The state reported a total cash position of $4.3 billion as of Feb. 23, 2019. Connecticut projects a weekly cash position that runs throughout each current fiscal year, and projects a week ending cash position of at least $3.1 billion through the remainder of fiscal 2019.

In previous years, Connecticut had been able to access external debt markets to sell deficit funding bonds when it ended in a deficit budgetary position in order to maintain adequate liquidity. The state has no current plans for external cash flow borrowing.

We consider Connecticut to have a diverse revenue mix. On a budgetary basis, 59% of fiscal 2018 total general fund revenues were derived from PIT, while 26% came from sales tax.

The state has had a history of making timely midyear budget adjustments, including multiple midyear allotment rescissions imposed by the governor in fiscal 2015, and another rescission in September of that fiscal year to close fiscal 2016 projected midyear gaps, as well as additional legislatively enacted adjustments in December 2015 and March 2016. At the end of fiscal 2016, the legislature passed fiscal 2017 budget cuts of $847.2 million, and additional revenue measures of $136.3 million. Fiscal 2017 ended with a $22.7 million general fund operating deficit, or 0.1% of expenditures. Early in the current biennium, the state anticipated a substantial midbiennium operating deficit,

prompting midbiennium budget adjustments in May 2018. We anticipate that Connecticut will make a combination of budget adjustments and budget reserve drawdowns to meet potential midbiennium deficits as needed, although the state is currently forecasting a substantial operating surplus at fiscal year-end 2019.

Connecticut uses consensus revenue forecasting to produce a five-year revenue forecast for budgeting purposes. We believe the state has substantial legal authority to cut expenditures, but cyclical revenue trends and high costs in such areas as pension and OPEB might somewhat limit state flexibility. Connecticut considers OPEB benefits as a contractual right of employees.

We believe state budgetary performance has shown cyclical trends, with the state at times issuing deficit financing notes. Connecticut's deficit financing economic recovery notes from the last recession matured on Jan. 1, 2018, relating to an original deficit financing of $915.8 million in 2009. State reserve levels over time indicate cyclical financial performance. The state's BSF was as high as 8.0% of general fund appropriations at fiscal year-end 2008, before dropping to 0.6% at fiscal year-end 2010, and rising most recently to 3.0% at fiscal year-end 2014 before dropping to 1.2% at fiscal year-end 2017. Currently, the state anticipates reserves to rise to 10.4% at fiscal year-end 2019.

Connecticut estimates that one-time revenue in its originally enacted 2016 budget totaled about 0.8% of budgeted revenues, while we estimate midyear adjustments increased one-time items by about another 0.8%. The state estimated only about 2.0% of fiscal 2017 revenues consisted of one-time items following passage by the legislature of midbiennium revisions, and 0.9% of budget in fiscal 2018. The state believes that if the governor's budget is enacted as proposed, there would be no one-time revenue.

The 2018-2019 consensus revenue forecast projects an economic growth rate of 2.1% for PIT in fiscal 2018 for withholding, and negative 1.5% for estimates and finals (including capital gains tax), compared with IHS Markit's projected personal income growth forecast of 2.8% for the full calendar 2017 and 3.8% in calendar 2018. PIT has been particularly difficult to forecast in recent years due to the progressive nature of the state income tax, the dependence on top taxpayers, and the proportion of variable capital gains tax realized by top taxpayers. Connecticut has attributed recent years' less-than-forecast revenue largely to fluctuations in capital gains tax. In our view, a degree of dependence on top taxpayers, who contribute a greater share of capital gains tax, adds to cyclicality. Connecticut estimates that millionaires comprising 0.7% of income tax filers contributed 26.4% of total state income tax collections in 2016.

A positive inclusion in budgets since fiscal 2012 has been full funding of the annual actuarially required state retirement system pension contribution, which we calculate at a relatively low 47% on a combined actuarial GAAP basis, using GASB 68 accounting as of the last 2018 GASB valuations. Recent, more conservative actuarial return assumptions have lowered funded ratios. The state employees system currently assumes a 6.9% return assumption, in conjunction, however, with what we see as an aggressive payroll growth assumption of 3.5% per year and a static mortality projection. The teachers' retirement system has also lowered its assumed rate of return to 8.0% from 8.5%, and the state proposes to lower it further to 6.9% if the governor's proposal is adopted, although the amortization of teachers' unfunded liabilities would similarly be stretched to 30 years.

On a GAAP basis, the state showed a positive general fund balance in fiscal 2018, the most recent audited year, after a

long period of chronic negative fund balances. At fiscal year-end June 30, 2018, the state had a positive total general fund balance of $1.15 billion, or 5.6% of expenditures (see table). The combined budget reserve and unassigned general fund balance totaled $960 million, or 4.6%. This contrasts to a total general fund balance of negative $494 million at the end of fiscal 2017, or 2.6% of expenditures and transfers out, and a larger deficit fund balance of negative $614 million, or 3.3% at fiscal year-end 2016.

On a scale from '1.0' (strongest) to '4.0' (weakest), S&P Global Ratings assigned a score of '1.7' to Connecticut's budgetary performance.

Debt And Liabilities

In our opinion, Connecticut's debt burden is high by all measures when compared with that of state peers, in part reflecting debt issued for education and other programs that in other states might be handled at the local level of government. It also includes previous debt issued for state pension liabilities. Combined debt, pension, and OPEB liabilities both per capita and as a percent of GSP rank second highest of the 50 states (see table 6 in "U.S. State Pensions Struggle for Gains Amid Market Shifts and Demographic Headwinds," published Oct. 30, 2018).

We calculate that Connecticut's approximately $24.3 billion in GO and tax-supported debt at fiscal year-end 2018 puts the state's total tax-supported debt per capita at about $6,810, a level we consider high. Debt levels have been rising (see table), although we expect them to stabilize as the state reaches its debt cap, and may eventually decline if Connecticut adopts the governor's plan for a debt diet and the use of tolling to finance the state's substantial transportation capital needs. We calculate debt to personal income as high at 9.4% at fiscal year-end 2018, using 2017 debt and 2017 reported personal income, and tax-supported debt service also as high at 15.3% of total GAAP general governmental expenditures, less federal revenue and restricted grants. Tax-supported debt includes GO debt, capital leases, and special tax-supported transportation bonds.

The state's transportation infrastructure program is planned to remedy perceived underinvestment in transportation infrastructure in previous years. The program will take a number of years to ramp up, requiring the hiring of new engineers in the department of transportation and new design work and environmental permits. The new program involves up to $6.6 billion of additional state bonding in the initial five years, consisting mostly of transportation fund-secured bonds, and a small portion of new GO bonding. The potential exists for substantial further bonding beyond the initial five-year period, if gas taxes or transportation-related fees were increased, or if the governor's proposal for highway tolling is adopted.

On a positive note, at fiscal year-end 2018 the amortization of tax-backed debt outstanding remained rapid at 68% in 10 years, under our calculation. Connecticut's debt profile is largely in fixed-rate obligations, with approximately 7.5% of state GO debt outstanding consisting of variable-rate debt. The state has only a low $20 million exposure to swap agreement risk in our opinion. In 2018, it sold a $300 million variable-rate direct placement GO bond, and a $135 million direct placement variable-rate GO refunding. However, we do not believe the direct placement debt poses a significant contingent risk because it does not allow debt acceleration in the event of a default.

On a combined basis, the state's retirement systems had a 46.7% GASB 68-funded ratio at fiscal year-end 2018,

improved from 41.4% at fiscal year-end 2016 due in part to strong investment returns and continued appropriations for full ADC.

Because almost all state pension plan liabilities are attributable to either state employees or state-funded teacher pension plans, GASB 68's accounting breakout of the state-only liability does not appreciably change overall state pension liabilities compared to Connecticut's actuarial report. The State Employees' Retirement Fund (SERF) has recorded a significant net pension liability of $21.7 billion and a 36.6% GASB 68-funded ratio as of June 30, 2018 (barely changed from the year before), and the teachers' system had a net pension liability of $13.2 billion and a 57.7% GASB 68-funded ratio as of June 30, 2018, up from 55.9% the year before.

The state has also released non-GAAP actuarial reports as of a June 30, 2018, valuation. The actuarial valuations, using a market valuation of assets, show the five-year pension investment returns have been 7.9% through June 30, 2018, although Connecticut also reports fourth-quarter 2018 losses trimmed the five-year return to 6.4% as of Jan. 31, 2019. SERF's higher unfunded liabilities, as a result of the lower 6.9% rate of return assumption, was offset to some degree in terms of annual contributions by a change to a longer 25-year amortization period for the unfunded liability from 17 years. This change to the amortization period went into effect for the fiscal year ended June 30, 2018.

Connecticut did not fund the full actuarial annual required contribution (ARC) in fiscal years 2008-2011, but has effectively funded the full ARC/ADC since. The SERF previously used the projected unit credit actuarial cost method, which is not aligned with the GASB standards, but the agreement with employee unions switched SERF to the GAAP-compliant entry age normal actuarial method. The change in rate of return assumptions and move to entry age normal valuations is expected to help amortize the unfunded liability in the future, even though annual state contributions are expected to continue to increase in the next several years because of the recent agreement (see "Connecticut’s Recent Pension Agreement With Unions Could Be Mildly Positive For The State," published Jan. 23, 2017) before moderating to a level dollar amount. As a result of previous underfunding, investment underperformance, and implementation of a more conservative actuarial return assumption, unfunded liabilities to personal income is what we view as high at 13.6%, although improved from 15.0% in 2016.

The state's pension bond sale in 2008 contained a covenant to maintain full ARC/ADC funding for the teachers' pension system, and we anticipate that Connecticut will continue to fully fund the ADC for both the SERF and the teachers' system, although part of the contribution could be made to come from local governments. However, in recent years pension contributions have not been greater than the sum of pension service costs, interest costs, and the amortization component. Connecticut has proposed pledging state lottery revenue toward the teachers' pension system and adding a general fund-supported bond reserve fund to be able to change the teachers' retirement fund without breaking bond covenants. The change would push out amortization of unfunded pension liabilities to 30 years and lower the rate of return assumption to a more conservative 6.9%. Combined with the longer amortization, the state estimates its annual teacher pension contribution would decline by $183 million in fiscal 2020. Although decreasing the annual pension contribution is not favorable from a credit perspective, we see the amount as too small to have much of a credit impact, and the lower return assumption could potentially head off a later spike in required contributions if investment performance underperformed actuarial assumptions.

Connecticut's OPEB liability is significant compared with that of other states (see "Rising U.S. States’ OPEB Liabilities

Signal Higher Costs Ahead," published Nov. 28, 2018), but recent actions to reduce the liability and pre-funding of an OPEB trust have resulted in a relatively stabilized unfunded liability. The combined net OPEB liability was $19.9 billion for the combined OPEB in the most recent SERF and teachers' valuations as of June 30, 2018, or $5,569 per capita, of which the state employees' net OPEB liability alone was $17.3 billion. Connecticut's OPEB trust funds have a relatively small combined fiduciary net position of $850 million, but since fiscal 2018 the state has begun making small but increasing contributions to the trust fund under a labor agreement. Connecticut contributed a total of annual OPEB cost for the state employees system in fiscal 2018 on a state budgetary basis.

The unfunded state employee OPEB liability had been a larger $26.6 billion at June 30, 2008. The lower liability is attributable to a change in the discount rate due to the creation of a trust fund, lower liabilities resulting from changes in plan design negotiated with the State Employee Bargaining Agent Coalition, and various healthcare cost-containment initiatives. Before the state reformed its OPEB system, OPEB costs had been forecast to rise sharply, reaching approximately $45 billion by fiscal 2017.

Connecticut is also statutorily required to fund one-third of teacher pension OPEB costs, plus the shortfall left after employer and employee contributions. The teachers' net OPEB liability alone was $3.5 billion as of June 30, 2018, with a fiduciary net position of only $63.4 million in the trust fund relating to teachers' retirement health care.

On a scale from '1.0' (strongest) to '4.0' (weakest), S&P Global Ratings assigned a score of '3.5' to Connecticut's debt and long-term liabilities.

Connecticut--General Fund Financial Summary

(Mil. $)	**--Fiscal year ending June 30--**			**--Fiscal year ended June 30--**				
General fund (GF) -- audited GAAP basis	**2021p**	**2020p**	**2019e**	**2018**	**2017**	**2016**	**2015**	**2014**
Revenue	N/A	N/A	N/A	20,663	18,502	18,215	17,954	17,400
Expenditures	N/A	N/A	N/A	18,077	17,138	17,444	16,936	16,591
Transfers in	N/A	N/A	N/A	1,644	394	177	206	460
Transfers out	N/A	N/A	N/A	2,587	1,641	1,375	1,375	(1,215)
Other	N/A	N/A	N/A	(940)	4	3	3	703
Net result	N/A	N/A	N/A	1,646	121	(424)	(148)	547
Total GF GAAP balance	N/A	N/A	N/A	1,151	(494)	(614)	(190)	(41)
as % of GF expenditures and transfers out	N/A	N/A	N/A	5.6	(2.6)	(3.3)	(1.0)	(0.3)
Budget reserve fund (which is included in total fund balance)	N/A	N/A	N/A	1,201	213	236	406	519
as % of GF expenditures and transfers out	N/A	N/A	N/A	5.8	1.1	1.3	2.2	3.4
GF--budgetary basis of accounting								
Revenue	19,887	19,268	19,473	18,199	17,703	17,781	17,282	17,608
Net expenditures	19,867	19,259	18,957	18,681	17,726	17,951	17,395	17,360
Operating surplus	20	9	516	(483)	(23)	(170)	(113)	249
Net operating surplus % of net expenditures*	0.10	0.05	2.72	(2.59)	(0.13)	(0.95)	(0.65)	1.43
Budget reserve fund	2,794	2,354	1,968	1,185	213	236	406	519

Connecticut--General Fund Financial Summary (cont.)

(Mil. $)	--Fiscal year ending June 30--			--Fiscal year ended June 30--				
General fund (GF) -- audited GAAP basis	2021p	2020p	2019e	2018	2017	2016	2015	2014
Budget reserve as % of net expenditures	14.1	12.2	10.4	6.3	1.2	1.3	2.3	3.0
Tax-backed debt								
GO debt	N/A	N/A	N/A	18,763	18,399	17,395	16,403	15,282
Transportation fund debt	N/A	N/A	N/A	5,540	5,042	4,520	4,090	3,771
Other tax-backed debt	N/A	N/A	N/A	28	208	385	555	618
Total tax-backed debt	N/A	N/A	N/A	24,331	23,649	22,300	21,048	19,671
State population (mil.)	N/A	N/A	N/A	3.572665	3.57388	3.578674	3.587509	3.594915
Tax-backed debt per capita	N/A	N/A	N/A	6,810	6,617	6,231	5,867	5,472
Personal income§	N/A	N/A	N/A	257,714	257,714	249,513	246,012	239,857
Tax-backed debt to personal income (%)	N/A	N/A	N/A	9.4	9.2	8.9	8.6	8.2

GF--General fund. GAAP--Generally accepted accounting principles. GO--General obligation. p--Proposed. e--Estimated. N/A--Not applicable. *Governor's executive budget proposal for fiscal 2020-2021 biennium budget. §2017 personal income is used for 2018 debt ratios.

Ratings Detail (As Of March 19, 2019)

Connecticut approp		
Long Term Rating	A-/Positive	Affirmed
Connecticut GASTAX		
Long Term Rating	A+/Positive	Affirmed
Connecticut GASTAX		
Long Term Rating	A+/Positive	Affirmed
Connecticut GASTAX		
Long Term Rating	A+/Positive	Affirmed
Connecticut GASTAX (BAM)		
Unenhanced Rating	A+(SPUR)/Positive	Affirmed
Connecticut GASTAX (BAM)		
Unenhanced Rating	A+(SPUR)/Positive	Affirmed
Connecticut GASTAX (BAM) (SECMKT)		
Unenhanced Rating	A+(SPUR)/Positive	Affirmed
Connecticut GASTAX (BAM) (SECMKT)		
Unenhanced Rating	A+(SPUR)/Positive	Affirmed
Connecticut GO		
Long Term Rating	A/Positive	Affirmed
Connecticut GO		
Long Term Rating	A/Positive	Affirmed
Connecticut GO		
Long Term Rating	A/Positive	Affirmed
Connecticut GO		
Long Term Rating	A/Positive	Affirmed

Ratings Detail (As Of March 19, 2019) (cont.)		
Connecticut GO		
Long Term Rating	A/Positive	Affirmed
Connecticut GO		
Long Term Rating	A/Positive	Affirmed
Connecticut GO		
Long Term Rating	A/Positive	Affirmed
Connecticut GO		
Long Term Rating	A/Positive	Affirmed
Connecticut GO		
Long Term Rating	A/Positive	Affirmed
Unenhanced Rating	NR(SPUR)	
Connecticut GO		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (AGM)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (AGM)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (AGM)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (AGM)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (AGM)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (AGM)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (AGM)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (AGM)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (AGM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (AGM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (AGM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (AGM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (AGM) (SEC MKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed

Ratings Detail (As Of March 19, 2019) (cont.)		
Connecticut GO (AGM) (SEC MKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (AGM) (SEC MKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (AGM) (SEC MKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (AGM) (SEC MKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (AGM) (SEC MKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
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Connecticut GO (BAM)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed

Ratings Detail (As Of March 19, 2019) (cont.)		
Connecticut GO (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
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Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed

Ratings Detail (As Of March 19, 2019) (cont.)		
Connecticut GO (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM) (SEC MKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM) (SEC MKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (BAM) (SEC MKT)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO (FGIC)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut GO		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut Special Tax Gas		
Unenhanced Rating	A+(SPUR)/Positive	Affirmed
Hartford GO		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Capital Region Development Authority, Connecticut		
Connecticut		
Capital Region Development Authority (Connecticut) parking & energy fee rev bnds (Connecticut) ser 2005 C due 06/15/2029		
Long Term Rating	A/Positive	Affirmed
Capital Region Dev Auth (Connecticut) GOEQUIV		
Long Term Rating	A/Positive	Affirmed
Capital Region Dev Auth (Connecticut) GOEQUIV		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut Hlth & Educl Facs Auth, Connecticut		
Connecticut		
Connecticut Hlth & Educl Facs Auth (Connecticut) APPROP		
Long Term Rating	A-/Positive	Affirmed
Connecticut Hlth & Educl Facs Auth (Connecticut) APPROP		
Long Term Rating	A-/Positive	Affirmed
Connecticut Hlth & Educl Facs Auth (Connecticut) GO		
Long Term Rating	A/Positive	Affirmed
Connecticut Hlth & Educl Facs Auth (Connecticut) GO		
Long Term Rating	A/Positive	Affirmed
Connecticut Hlth & Educl Facs Auth (Connecticut) GOEQUIV		
Long Term Rating	A/Positive	Affirmed
Connecticut Hlth & Educl Facs Auth (Connecticut) GOEQUIV		
Long Term Rating	A/Positive	Affirmed
Connecticut Hlth & Educl Facs Auth (Connecticut) GOEQUIV		
Long Term Rating	A/Positive	Affirmed

Ratings Detail (As Of March 19, 2019) (cont.)		
Connecticut Hlth & Educl Facs Auth (Connecticut) GOEQUIV		
Long Term Rating	A/Positive	Affirmed
Connecticut Hlth & Educl Facs Auth (Connecticut) GOEQUIV		
Long Term Rating	A/Positive	Affirmed
Connecticut Hlth & Educl Facs Auth (Connecticut) GOEQUIV		
Long Term Rating	A/Positive	Affirmed
Connecticut Hlth & Educl Facs Auth (Connecticut) GOEQUIV		
Long Term Rating	A/Positive	Affirmed
Connecticut Hlth & Educl Facs Auth (Connecticut) GOEQUIV		
Long Term Rating	A/Positive	Affirmed
Connecticut Hlth & Educl Facs Auth (Connecticut) MORALOB (ASSURED GTY)		
Unenhanced Rating	BBB(SPUR)/Positive	Affirmed
Connecticut Hlth & Ed Fac Auth rev bnds (Connecticut State Univ Sys Issue) ser D-2 dtd 03/15/2002 due 11/01/2020-2022		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut Hlth & Ed Fac Auth (Connecticut) univ issue		
Unenhanced Rating	A(SPUR)/Positive	Affirmed
Connecticut Hsg Fin Auth, Connecticut		
Connecticut		
Connecticut Hsg Fin Auth (Connecticut) state-supported sp oblig bnds		
Long Term Rating	A/Positive	Affirmed
Connecticut Hsg Fin Auth (Connecticut) state-supported sp oblig bnds		
Long Term Rating	A/Positive	Affirmed
Connecticut Hsg Fin Auth (Connecticut) state-supported sp oblig bnds (Connecticut) ser 24 due 06/15/2048		
Long Term Rating	A/Positive	Affirmed
Connecticut Hsg Fin Auth (Connecticut) GOEQUIV		
Long Term Rating	A/Positive	Affirmed
Connecticut Hsg Fin Auth (Connecticut) GOEQUIV		
Long Term Rating	A/Positive	Affirmed
Connecticut Hsg Fin Auth (Connecticut) GOEQUIV		
Long Term Rating	A/Positive	Affirmed
Connecticut Hsg Fin Auth (Connecticut) GOEQUIV		
Long Term Rating	A/Positive	Affirmed
Connecticut Hsg Fin Auth (Connecticut) GOEQUIV		
Long Term Rating	A/Positive	Affirmed
Connecticut Innovations Incorporated, Connecticut		
Connecticut		
Connecticut Innovations Inc (Connecticut) GOEQUIV		
Long Term Rating	A/Positive	Affirmed
Connecticut Dev Auth (Connecticut) GO		
Unenhanced Rating	A(SPUR)/Positive	Affirmed

Ratings Detail (As Of March 19, 2019) (cont.)		
Hartford, Connecticut		
Connecticut		
Connecticut GO (ASSURED GTY)		
Unenhanced Rating	A(SPUR)/Positive	Affirmed

Many issues are enhanced by bond insurance.

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