MOODY'S
INVESTORS SERVICE

CREDIT OPINION
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Update

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Connecticut (state of)

Update - Moody's Downgrades to A1 Connecticut GO Bonds; Outlook Stable

Summary Rating Rationale

Moody's Investors Service has downgraded the rating of the state of Connecticut's general obligation debt to A1 from Aa3. Moody's has also downgraded to A1 from Aa3 outstanding ratings on special tax obligation senior and subordinate lien bonds. Bonds secured by state agreements to pay debt service with funds that are deemed appropriated, through a special capital reserve fund, the UCONN 2000 program or other state guarantee mechanisms, have also been downgraded to A1 from Aa3. State-supported child care revenue bonds requiring appropriation for debt service payments have been downgraded to A2 from A1. Moody's has affirmed the A1 rating on economic development bonds issued by the Connecticut Development Authority and the VMIG 1 on the state's General Obligation Bonds, 2016 Series C bonds. The outlook on Connecticut was revised to stable from negative.

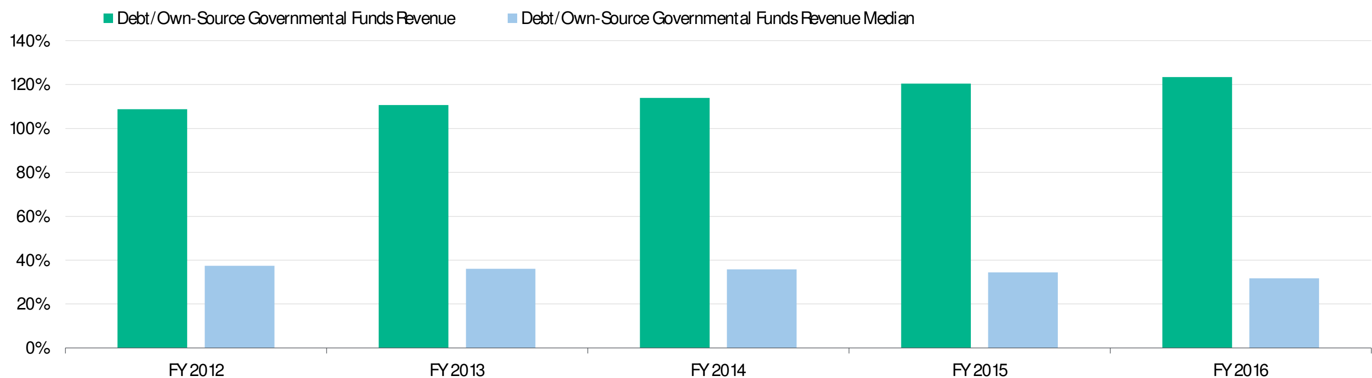
The downgrades reflect continuing erosion of Connecticut's finances, evidenced by the pending elimination of its rainy day fund, growing budget gaps and rising debt levels. The pressures created by growing fixed costs, coupled with weak economic performance, are unlikely to relent and will raise the risk of credit-negative actions such as deficit borrowing or backloaded financings. The affirmation of the A1 Connecticut Development Authority's economic development bonds reflects a change in our assessment of the strength of the state's guarantee of the bonds.

The A1 GO rating reflects Connecticut's high income levels, strong governance, and adequate liquidity, offset by high fixed costs for debt service, pension, and post-employment benefits relative to the state's budget; unfunded pension liabilities and debt outstanding that are among the highest, relative to revenues, of any state in the country; and minimal reserve levels. The rating also reflects a lagging economy that is highly dependent on volatile revenue sources and three consecutive years of population loss. The A1 rating on bonds secured by a special capital reserve fund and similar structures reflects the very strong legal security, which does not require annual appropriation, and essentiality of projects financed, supporting a rating at the state level.

The A1 rating on senior and subordinate lien special tax obligation bonds reflects the strong legal covenants, including a two times additional bonds test and a combined senior and second lien debt service reserve funded at maximum aggregate annual debt service; the diversified stream of pledged revenues with some sensitivity to economic fluctuations; and satisfactory debt service coverage. Both economic and legal factors closely link the credit profile of the special transportation fund to the state general obligation profile.

The A2 rating on state-supported child care bonds reflects the requirement for annual appropriation for debt service. The VMIG-1 short-term rating on the state's 2016 Series C variable rate demand bonds reflects the credit quality of the Bank of America, N.A.(A1(cr)/P-1(cr)) as provider of liquidity support in the form of a standby bond purchase agreement (SBPA), the long-term rating of the bonds, and our assessment of the likelihood of an early termination or suspension of the SBPA without a final mandatory tender.

Exhibit 1
Connecticut Net Tax-Supported Debt-to-Revenues is Four Times State Median



Source: Moody's Investor's Service; Connecticut audited financial statements

Credit Strengths

» Legislated support for application of operating surpluses to the Budget Reserve Fund (BRF)

» Wealthiest state in the nation with per capita personal income levels well above national levels

» Strong governance framework with the ability to make mid-year budget adjustments

Credit Challenges

» Fixed costs for debt, pension and other post-employment benefits (OPEB) relative to budget are amongst the highest in the nation

» Vulnerability to financial market fluctuations due to effect on capital gains for very high -wealth residents and employment in the financial services sector

» General fund balance sheet will remain negative, and the rainy day fund will have a modest balance, over near term due to state's slower recovery from the recession

Rating Outlook

Connecticut's outlook is stable, reflecting the state's strong provisions to promote fiscal discipline, which pair redressing elements of its high leverage position and requiring GAAP-based budgeting.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

Factors that Could Lead to an Upgrade

» Achievement and maintenance of higher GAAP-basis combined available reserve levels

» Established trend of structural budget balance

» Evidence of sustained stronger economic performance

» Reduced pension and debt leverage relative to Moody's 50-state medians, resulting in lower annual fixed costs

Factors that Could Lead to a Downgrade

» Significant additional leverage, encompassing bonded debt, pension and OPEB obligations and negative unassigned GAAP balances

» Rapid acceleration of revenue/economic/demographic weakness

» Declining liquidity position

Key Indicators

Exhibit 2

Connecticut	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Operating Fund Revenues (000s)	16,378,765	16,909,327	16,880,411	17,187,461	17,750,816
Balances as % of Operating Fund Revenues	-6.4%	-7.2%	-1.2%	-2.3%	-4.3%
Net Tax-Supported Debt (000s)	18,615,067	19,623,311	20,272,617	22,103,517	23,265,534
Net Tax-Supported Debt/Personal Income	9.1%	9.2%	9.0%	9.8%	9.7%
Net Tax-Supported Debt/Personal Income 50 State Median	2.8%	2.6%	2.5%	2.5%	2.5%
Debt/Own-Source Governmental Funds Revenue	108.8%	110.7%	113.9%	120.5%	123.4%
Debt/Own-Source Governmental Funds Revenue Median	37.4%	36.1%	35.8%	34.4%	31.7%
ANPL/Own-Source Govt Funds Revenue	335.7%	326.0%	298.5%	288.4%	285.0%
ANPL/Own-Source Govt Funds Revenue Median	94.2%	91.8%	90.9%	84.9%	N/A
Total Non-Farm Employment Change (CY)	0.8%	0.8%	0.7%	0.8%	0.3%
Per Capita Income as a % of US (CY)	146.9%	144.1%	143.7%	142.8%	143.3%

Source: Moody's Investors Service; Connecticut audited financial statements

Recent Developments

On May 10, Governor Dannel Malloy presented a deficit mitigation plan to state legislators to close the projected $389.8 million fiscal 2017 budget deficit. The deficit mitigation plan relies primarily on depleting the state's $235 million rainy day fund, combined with fund sweeps and spending cuts and postponements, some of which require legislative approval. The plan also outlines actions to protect balances in the state's Special Transportation Fund.

Detailed Rating Considerations

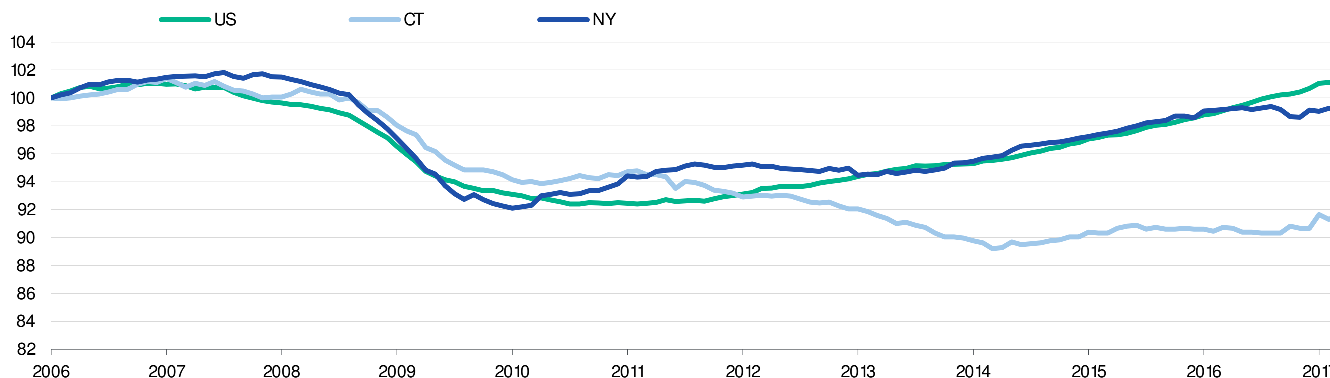
Economy

Connecticut is a wealthy state, with per capita personal income exceeding 143.3% of the US. However, the state's economy continues to lag that of the nation. While the state's unemployment rate has hovered roughly on par with the nation's, registering 4.8% in March vs 4.5% nationwide, the state has not yet quite regained jobs lost to the recession. Wage growth has faltered as a result: the state experienced only 7.2% growth in average annual wages from calendar year 2011-2015 versus 14.5% in calendar 2004-2008. Job gains have been concentrated in education and health services, leisure and hospitality, transportation and utilities and professional and business services.

Economic headwinds include lackluster performance in the state's high-paid financial activities sector (see Exhibit 3). While the US has recovered nearly all the financial activities jobs lost in the recession, Connecticut continued to lose finance jobs into 2014 and has since seen little growth in the sector.

The state's demographics show a negative trend, with three years of population loss since 2013, contributing to an underperforming housing market and lagging labor force growth.

Exhibit 3
CT Financial Sector Falters as US and New York Gain
(January 2006=100)

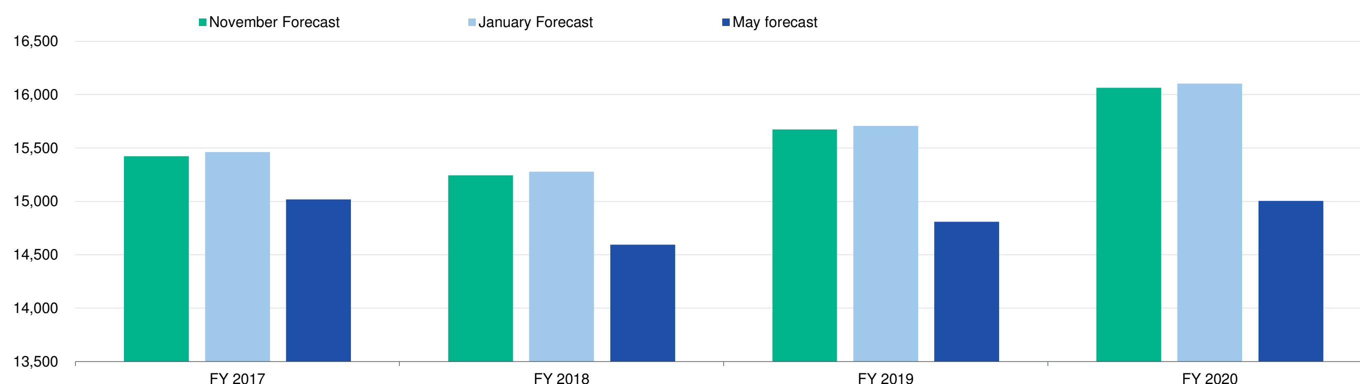


Source: Moody's Analytics; US BLS

Finances and Liquidity

Connecticut faces a fiscal 2017 year-end budget deficit of nearly $400 million because of unexpectedly disappointing April tax collections. Lowered revenue expectations have been rolled forward to the fiscal 2018-2019 biennium, increasing the 2018 gap by nearly $600 million to approximately $2 billion (see Exhibit 4). For fiscal 2017, which ends on June 30, the state must find late-year spending reductions. The state will deplete its $235 million rainy day fund in order to close the expected current year deficit and in keeping with the governor's pledge to avoid deficit borrowing. The projected fiscal 2017 deficit will be the third consecutive year of red ink for the state. Fiscal 2016 ended with a budgetary deficit of $170 million, closed with a draw on the state's rainy day fund, and fiscal 2015 ended $113 million in the red, also prompting a draw on the rainy day fund.

Exhibit 4
Consensus Revenue Forecast Plummets Late in Fiscal 2017
Total General Fund Tax Revenue in Thousands



Source: Connecticut Office of Policy and Management

Prior to April tax collections, lawmakers contemplating the fiscal 2018 budget were already challenged to accommodate large and growing fixed costs for pensions, debt service, retiree health coverage. The annual Fiscal Accountability Reports of the Office of Policy and Management and the legislative Office of Fiscal Analysis identified in November a fiscal 2018 gap of about $1.3 billion. Governor Malloy's proposed budget for the FY 2018 - FY 2019 biennium was premised on this gap and offered politically challenging solutions. These included recurring labor savings of $700 million and shifting a portion of teacher pension costs to local governments, in addition

to revenue initiatives. These and other alternative solutions are currently being debated in the state legislature and discussed with labor representatives, but may prove a heavy political lift.

The impact of rising costs is compounded by revenue trends. The most recent consensus forecast projects a 1.7% general fund revenue decrease in fiscal 2017 and a 2.8% decrease in fiscal 2018, with slow growth of less than 1% in fiscal year 2019 and 2020. In addition to the expectation of lower personal income tax revenues, the forecast reflects a more pessimistic view of sales and business tax collections in fiscal 2018.

LONG-TERM PLAN TO ADDRESS LARGE NEGATIVE GAAP BALANCE INTERRUPTED

On a GAAP basis, the state has a long-standing large cumulative GAAP deficit, which stood at -$999 million on June 30 2016, or about 4.3% of operating revenues. The state implemented a plan to address the deficit, which included devoting the proceeds of $560 million of 2013 general obligation bonds to reduce it and committing to amortize the remaining gap from annual payments from the general fund. While the strategy has little balance sheet impact in the short run, maintaining discipline over time would reduce the state's liabilities. However, the deficit mitigation plan for fiscal 2017 relies on eliminating the year's payment of roughly $48 million.

FIXED COSTS COMMAND A THIRD OF BUDGET

The state's combined debt service, pension, and OPEB contributions in fiscal 2016 were nearly 30% of own-source governmental revenues, among the highest of the states. As a share of general fund revenues, these fixed costs were 32%, illustrating the tight squeeze that the state's long-term obligations are placing on the operating budget. Fixed costs will command 36% of general fund revenues by 2019, based on the latest revenue forecast and state spending projections. The high fixed costs are partly attributable to the state's absorption of certain costs covered by local governments in most other states. High fixed costs reduce the share of discretionary spending and the state's budgetary flexibility. Unlike other states with high fixed costs, however, Connecticut's actual pension contributions are very close to the "tread water" amount, which is the amount of contribution that would prevent further growth in unfunded liabilities were actuarial targets for investment returns and other assumptions met during the year.

LIQUIDITY

Connecticut's liquidity remains adequate. The state did not have to borrow for cash flow purposes in calendar 2015 or fiscal 2016 and does not expect to do so in fiscal 2017. Cash balances averaged $2 billion in fiscal 2016 and averaged $2.2 billion through April of fiscal 2017. As of May 13 2017, available cash was $2.3 billion. However, use of rainy day fund and other cash balances for deficit mitigation will diminish the state's cash margin.

Debt and Pensions

Connecticut is a frequent borrower and the state's debt per capita and debt-to-personal income ranked first and third, respectively, among the 50 states for Moody's 2017 debt medians. Net tax-supported debt equaled $6,505 per capita and 9.7% of total state personal income, well above the 50-state median of $1,006 in debt per capita and 2.5% for debt-to-personal income. These high debt ratios are partly due to substantial capital financing for K-12 school building construction that is carried out at the local level in many other states. However, pension obligation bonds, economic recovery notes (deficit borrowing) and GAAP conversion bonds to address a portion of the state's sizeable cumulative GAAP deficit add considerably to the state's normal sizeable annual debt issuances and ensure that Connecticut's debt ratios will remain among the highest in the country for the foreseeable future. Connecticut adheres to a 20-year level principal repayment schedule for its general obligation debt, with a declining debt service schedule that provides some flexibility.

DEBT STRUCTURE

Connecticut's $23.3 billion in net tax-supported debt outstanding consists primarily of general obligation bonds, which account for 71% of NTSD. Bonds backed by special taxes for highway construction account for another 22% of state debt. Most GO debt is structured with 20-year principal amortization, resulting in a pay-out rate of 67% within 10 years. The state has issued economic recovery notes as deficit financing instruments, which will be paid off in mid fiscal 2018. Other debt consists primarily of bonds issued by related organizations, especially the University of Connecticut, for which the state guarantees payment from special capital reserve funds or directly from the state treasury.

The state has $1.656 billion in variable rate debt, approximately 10% of the state's total GO debt, most of which is indexed to either SIFMA or CPI. One series is variable rate with an SBPA provided by Bank of America, N.A. (A1(cr)/P-1(cr)).

DEBT-RELATED DERIVATIVES

Only $40 million of the state's variable rate debt is swapped to fixed, based on 60% of LIBOR or a percentage point above CPI, after a $280 million swap was terminated at par on March 1, 2015. On June 1, 2017, $20 million of the swaps will terminate. The swap counterparties are JPMorgan Chase Bank, N.A. (Aa2(cr)/P-1(cr)) and Morgan Stanley Capital Services Inc. As of March 30, 2017, the mark-to-market was minimal, at negative $1.046 million against the state. In accordance with its swap guidelines, the state generally negotiates provisions that permit funding a required termination payment over a period of time to allow time for a refunding. Accordingly, the state would have 270 days to fund a termination payment for its general obligation swaps. The state has no plan to incorporate swaps into future GO bonds.

PENSIONS AND OPEB

Connecticut's adjusted net pension liability (ANPL), our measure of the government's pension burden, is significantly above the 50-state median. As of the state's 2016 financial statements, ANPL of $53.7 billion was 285% of own-source governmental revenue, and 200% of total governmental revenue, the second highest among the states. The state participates in 3 pension systems, of which the most significant are the State Employees Retirement System (SERS) and the Teachers Retirement System (TRS). Connecticut is among the handful of states that take responsibility for directly funding teacher pensions. Moody's ANPL reflects certain adjustments made to improve comparability of reported pension liabilities.

The state contributes the full amount of its actuarially determined contribution, about $2.5 billion in fiscal 2016. It is required via bond indenture to pay the full required contribution to the teachers plan and by collective bargaining to do the same for the state employees plan. Even so, in fiscal 2015 its contributions would not have prevented its net pension liability (NPL) from growing even if investment returns all the actuarial assumptions associated with the plan had come to fruition, as the contributions were about 92% of our "tread water" benchmark, which is the payment covering the year's newly accrued service costs and interest on the NPL. The assumed rate of investment return on the TRS fund assets, which also is used the discount the liabilities, was reduced to 8% from 8.5% starting with the 2016 valuation, leading to a significant increase in the contribution for fiscal 2018. The state also recently reached an agreement with labor representatives to change its approach to funding SERS to a level dollar payment, to lower the investment rate of return assumption to 6.9% from 8%, and to extend amortization of most of the plan's unfunded liabilities to 2046 from 2032.

These changes will benefit the budget in future years (after the end of the 2017-2019 biennium) because contributions were previously scheduled to escalate throughout the next decade until unfunded liabilities were fully amortized. Although improving the long-term outlook for the state, the changes do not mitigate the near and medium pressure from exceptionally large pension contributions.

Connecticut also has a very high OPEB liability. As reported in the fiscal 2016 financial statements, the liability is $19.2 billion. The state is responsible for the $2.99 billion Teachers' OPEB liability as of the June 30 2016 valuation, a 23% increase in UAAL since the 2014 valuation. The OPEB trust fund contained $229.6 million in net assets as of June 30, 2015. As of 2011, employees were required to make contributions to prefund OPEB benefits, for which the state is required to make matching contributions starting July 1 2017.

Governance

The state's financial management is characterized by strong practices that include timely budget adoption and binding consensus revenue forecasting conducted at least three times a year. Annual multi-year Fiscal Accountability reports are produced by both the governor's budget office and the legislative office of fiscal analysis, and the state releases monthly budgetary updates. The state constitution requires a balanced budget, given greater force by the state's recent move to GAAP-basis budgeting. In addition, the state is not constrained by supermajority requirements to enact tax increases, mandated initiatives or voter referenda.

The governor's executive authority to cut expenses mid-year without legislative approval is limited to 5% of an individual appropriation, not to exceed 3% of any fund providing only moderate flexibility. We consider strong executive flexibility to make mid-year spending adjustments a plus. If a deficit exceeds 1% of the general fund, a timely deficit mitigation plan is required to be developed by law. Some of the state's financial provisions are not highly effective, such as the statutory limit on debt payable from the general fund, which is not accompanied by a debt affordability analysis and has not prevented the state from accumulating very

high debt levels. A constitutional cap on spending has met with an opinion from the attorney general stating that the general assembly must adopt definitions before it can be operative.

The state has taken action to address some of its most pressing long-run financial challenges in recent years by implementing pension and OPEB reforms and committing to moving pension contributions to a more adequate level, although the state's long-term obligations remain formidable. The state also has statutory requirements to deposit budget surpluses into the rainy day fund at year end.

Legal Security

The state's general obligation bonds are secured by its full faith and credit pledge.

The state's lease appropriation bonds are secured by general fund appropriation or by general funds that are deemed appropriated.

The state's Special Tax Obligation bonds are secured by a pledge of taxes deposited in the Special Transportation Fund for payment of debt service on the bonds.

Obligor Profile

The State of Connecticut has a population of almost 3.6 million people. The state, located in the northeastern US, has a large and diverse economy with a gross state product of $253 billion. It is the wealthiest state in the country with per capita income of 143% of the US average.

Methodology

The principal methodology used in the general obligation rating was US States Rating Methodology published in April 2013. The principal methodology used in the lease appropriation rating was Lease, Appropriation, Moral Obligation and Comparable Debt of US State and Local Governments published in July 2016. The principal methodology used in the special tax rating was US Public Finance Special Tax Methodology published in January 2014. The additional methodology used in the short-term rating was Variable Rate Instruments Supported by Conditional Liquidity Facilities published in March 2017. Please see the Rating Methodologies page on www.moodys.com for a copy of these methodologies.

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