State of Connecticut

Taxable General Obligation Bonds (2017 Series A)

&

General Obligation Bond Anticipation Notes (2017 Series A)

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Executive Summary

Kroll Bond Rating Agency (KBRA) has taken the following actions relating to the State of Connecticut (the “State”) and Connecticut Innovations, Incorporated.

Ratings

Issuer: State of Connecticut (the "State")

Series/Bond	Rating	Outlook	Action	Amount
Taxable General Obligation Bonds (2017 Series A)	AA-	Negative	Assigned	Approx. $450.0 million
General Obligation Bond Anticipation Notes (2017 Series A)	K1+		Assigned	Approx. $400.0 million
General Obligation Bonds	AA-	Negative	Affirmed	Approx. $18.06 billion [2]

Issuer: Connecticut Innovations, Incorporated [1]

Series/Bond	Rating	Outlook	Action	Amount
State of Connecticut General Fund Obligation Bonds 2014 Series A	AA-	Negative	Affirmed	Approx. $17.0 million [2]

KBRA’s long-term ratings do not apply to bonds backed by a letter of credit or liquidity facility, unless otherwise noted.

[1] KBRA views the obligation of the State to pay debt service on the 2014 Series A Bonds as tantamount to the general obligation security of the State.

[2] Amounts are as of November 1, 2017

The short-term rating on the General Obligation Bond Anticipation Notes (2017 Series A) (BANS) is based on KBRA’s long term rating on the State of Connecticut General Obligation Bonds and KBRA’s review of factors that may impact market access for financing to retire the BANS. For mapping of the long-term rating to the short-term rating, please refer to the short-term **KBRA Rating Scale**.

The State has demonstrated its ability to access the financial markets through its history of issuance of long-term debt several times a year. The State has $18.1 billion outstanding in General Obligation Bonds. Prior to this issuance, the State last issued BANS in 2015. The State Bond Commission has authorized bonds to retire the 2017 Series A BANS under its General Obligation Bond authorization process with a current authorization for $1 billion of Bond and Notes. The State regularly provides the market with comprehensive disclosure on credit issues and updated financial information. The maturity of the BAN is September 14, 2018.

KBRA’s long-term rating assessment is based on its review of the four KBRA rating determinants included in KBRA’s ’s **U.S. State General Obligation Rating Methodology** KBRA has assigned the following Rating Determinant ratings:

- Management Structure, Budgeting Practices and Policies: AA+
- Debt and Additional Continuing Obligations: A+ (revised from AA-)
- Financial Performance and Liquidity Position: A+
- State Resource Base: AA-

Security

The Taxable General Obligation Bonds (2017 Series A) and General Obligation Bond Anticipation Notes (2017 Series A) are general obligations of the State and are secured by Connecticut's full faith and credit pledge. All general obligation bond debt service of the State is deemed appropriated without further action by the State Legislature.

Use of Proceeds

Proceeds of the 2017 Series A Bonds and 2017 Series A Notes will be used to fund capital projects of the State.

Key Rating Strengths
• Current leadership has demonstrated an ability and willingness to make adjustments during the fiscal year to maintain budget balance.
• A strong financial management framework exists for tracking revenues and monitoring budget performance as well as an established mechanism for adjusting budgeted expenditures during the fiscal year.
• Connecticut has the highest personal per capita income in the country at $69,311 for calendar year 2016.
• Available cash balances provide good liquidity for operations, without utilization of external borrowing.

Key Rating Concerns
• Depletion of the State's Budget Reserve Fund over the last three years to an amount equal to 1.1% of General Fund expenditures in FY 2017.
• State's recent difficulty in accurately projecting personal income tax levels impacted by the performance of volatile financial markets, specifically capital gains taxes, and continued lack of significant growth in wage levels across the State.
• State's increasing budgetary burden related to fixed costs, specifically debt service, pension contributions, and Medicaid expenditures.
• Both the State debt burden and the State's level of pension liabilities are high, compared to other states, on a per capita basis and as a percentage of personal income and GSP.

Rating Summary

KBRA's assignment of the AA- rating and Negative outlook on the State of Connecticut Taxable General Obligation Bonds (2017 Series A) and a K1+ rating to the General Obligation Bond Anticipation Notes (2017 Series A) reflects the State's difficulty over the last several years to accurately project final and estimated income tax revenue levels and continued slow growth in the withholding portion of income taxes. These factors have resulted in ongoing personal income tax revenue shortfalls over the last several fiscal years. The State continues to closely monitor revenue performance and budget to actual operating performance on a monthly basis and both the Governor and the Legislature have taken action to balance financial operations, as needed, over the last three years. KBRA views the State's ability and willingness to adjust the budget very positively and expects the State to continue to take action as needed.

The State has drawn on the Budget Reserve Fund (BRF) to balance operations when revenue shortfalls at the end of the fiscal year limited options to cut expenditures. Since FY 2016, the State's BRF has been drawn down from $406.0 million, or 2.3% of FY 2016 General Fund expenditures, to $213 million, or 1.1% of FY 2017 expenditures, which KBRA considers to be low given the progressive nature of the State's income tax structure and the volatility of revenue collections. In FY 2017, the State experienced a significant shortfall in both personal income tax collections and sales tax revenue due to the ongoing difficulty in tax revenue projection, lower than anticipated wage growth and further weakness in the State economy. FY 2017 ended with a rather modest operating deficit of $22.7 million and minimal drawdown of the Budget Reserve Fund due to actions taken under the deficit mitigation plan submitted by the Governor to the Legislature on May 10, 2017. It is notable that significant expenditure action was able to be implemented so close to the end of the fiscal year.

The Governor's proposed budget for the FY 2018/FY 2019 biennium, presented to the General Assembly in February 2017 closed budget gaps of $1.7 billion in FY 2018 and $1.9 billion in FY 2019 through a combination of revenue enhancements and expenditure reductions. The spending reductions were largely structural in nature and the revenue enhancements did not raise the major State taxes. The 2018/2019 proposed budget included implementation of municipal cost sharing of pension costs for the Teacher's Retirement System and adjustments to municipal aid In KBRA's view, the Governor's proposed budget reflected a positive effort to partially restructure the State's finances by increasing allocation of costs to local governments based on contraction in the State's revenue base.

The FY 2018-FY 2019 biennium budget was passed by the General Assembly on October 30, 2017 and signed into law by the Governor on October 31, 2017, four months into the fiscal year. Generally, based on conversations with the State's Office of Management and Policy (OPM), the adopted biennium budget is tightly balanced with limited room for budget adjustments on the expenditure side. The State is constrained in its ability to reduce state workforce by the recent agreement with the State employees' union (SEBAC) which prohibits layoffs of unionized workers for a four-year period. In KBRA's view, the adopted biennium budget is not structurally balanced based on use of a substantial level of non-recurring revenues., which include transfers from State operating funds as well as a number of revenue enhancements and tax cuts that are scheduled to expire in FY 2020, unless the General Assembly chooses to include them in the budget for the next biennium. Though the adopted budget does include a reduction in local education funding, it does not reflect a structural shift of cost sharing to local government. Based on the FY 2018/FY 2019 budget impacts, significant potential budget gaps have been identified for the FY 2020/2021 biennium. Budgeted revenues in the FY 2018/FY 2019 biennium budget were based on the May 1, 2017 consensus revenue estimates. Since budget adoption, the November 2017 consensus revenue estimate have been released and General Fund revenue estimates have been revised downwards, as discussed below.

As of November 20,2017, OPM is projecting a $202.8 million deficit in the General Fund for FY 2018, slightly more than one percent of net General Fund appropriations. These new projections reflect the adopted FY 2018-FY 2019 budget provisions and new consensus revenue estimates that were released on November 13, 2017. Revenue shortfalls are projected in federal grants, income taxes and sales taxes. In KBRA's view, the revenue projections in the adopted FY 2018/FY 2019 budget were fairly conservative, given the State's recent revenue performance, but the November revenue estimates indicate a further slowdown in the economic growth of the State. OPM has noted that there are indications that the final and estimated portion of the income tax may need to be further revised downward at some point in FY 2018. OPM has also noted that that these revenue estimates could be further impacted by changes in taxpayer behavior due to the changes in federal tax law. KBRA will continue to monitor the State's revenue performance and the impact on the State's financial operations.

In KBRA's view, the State continues to operate under a strong framework of financial management policies and procedures. As discussed above, the State closely monitors its budget to actual financial performance on a monthly basis. Under State statutes, the Governor may implement a certain level of expenditure reductions, or rescissions, without legislative approval, to maintain a balanced budget. Over the last several years, the Governor has adjusted the State's operating budget through the rescission process a number of times in response to projected deficits identified as part of the monthly monitoring of financial performance. If the monthly letter on financial performance issued by the Comptroller indicates a projected General Fund deficit greater than 1% of total General Fund appropriations, the Governor is required within thirty days to submit a report to the General Assembly that outlines a plan that the Governor shall implement to reduce expenditures to prevent a deficit. The Governor has developed and submitted deficit mitigation plans to the

General Assembly on a timely basis to restore balance to State operations. The State is currently engaged in the development and submission of a deficit mitigation plan.

Statutes passed by the General Assembly as part of the FY 2018-FY 2019 budget process include a new revenue cap that limits the ability to budget more than a certain percentage of estimated revenues in a budget year, a Revenue Volatility Cap and limits on annual issuance of GO bonds. The Revenue Volatility Cap requires that estimated and final payments of the personal income tax in excess of $3.15 billion be deposited into the Budget Reserve Fund beginning in FY 2018. Based on the November 2017 consensus revenue estimates, the level of final and estimated taxes for FY 2018 are estimated to be $3.14 billion. In KBRA's view, the establishment of this provision is a positive credit factor which will significantly reduce the budget volatility associated with budgeting final and estimated revenues going forward.

KBRA continues to view Connecticut's level of state tax-supported debt as high, relative to other states, when compared on a per capita basis and as a percentage of personal income and GSP. The State's high level of debt could potentially reduce financial flexibility and impact the State's ability to continue to provide its high level of services. When aggregate state and local debt of the State is compared to other states, the State's combined state and local debt level is more moderate. The total State's Net Pension Liability (NPL), which reflects the State's level of unfunded pension liability under GASB 68, for the two major pension plans is high compared to other US states. based on the ratio of NPL to population, personal income and GSP measures. The total NPL level falls within the top 10% of all states when compared on a per capita basis and as a percentage of personal income and GSP. The State has fully funded the actuarially recommended contribution for the State employees' pension fund since 2012 and for the State teacher's pension plan since 2006. Over the last several years, the State has instituted changes in the management of its pension and OPEB funds to reduce State contributions and provide the State with a more consistent and predictable schedule of funding requirements in the future. If certain fixed costs are aggregated, including debt service, pension contributions and pay-as-you-go OPEB costs, the total amount paid by the State in FY 2017 represented 18.9% of total governmental expenditures for FY 2016.

Outlook: Negative

KBRA's **Negative** outlook reflects the State's ongoing difficulty in accurately projecting State revenues, the recent drawdown of the BRF, the risks reflected in the adopted FY 2018-FY 2019 biennium budget and the continued weakness in the State's economy. The depletion of the BRF reduces the State's flexibility in managing future revenue shortfalls and other budget pressures. KBRA will continue to monitor both the trends in personal income tax collections and the State's progress in managing the FY 2018/FY 2019 budget.

In KBRA's view, the following factors may contribute to a rating upgrade:

- Trend of accurate revenue projections leading to budget stability in the General Fund.
- Trend of structurally balanced budgets and actual financial results showing General Fund operating surpluses.
- Sustained increase in funding level of State's Budget Reserve Fund.
- Significant increase in the funded ratios for the State's pension systems.

In KBRA's view, the following factors may contribute to a rating downgrade:

- Continued pressure on personal income tax collections resulting from difficulty in projecting final and estimated tax collections, further shifts in the State's employment base or decline in economic activity.

- Failure to take actions necessary to maintain budget discipline and balanced financial operations.

- Significant reliance on non-recurring revenues to balance the budget.

Key Rating Determinants

Rating Determinant 1: Management Structure, Budgeting Practices and Policies

KBRA views Connecticut's management structure and policies as providing a very strong framework for managing its financial operations and debt issuance compared with other states. Under state statute, the State is required to monitor its financial performance monthly and the Governor is empowered to take action, under statutory limitations, to maintain budget balance. State statutes require consensus revenue forecast to be developed on a regular basis three times a year. The State's statutes allow for broad revenue raising ability.

Under Connecticut's Constitution, the State is divided into three distinct branches: The Legislative, Executive, and Judicial. The executive power of the State is vested in the Governor who by statute is given broad powers. Governor Dannel Malloy was initially elected in November of 2010 for a term beginning in January 2011 and was reelected for a second term beginning in January of 2015. The term of the Governor along with State Treasurer and the Comptroller is four years. Governor Malloy has announced that he is not running for re-election in November 2018.The Treasurer has been in office since 1999. The Treasurer is primarily responsible for receiving and disbursing monies of the State, and is also responsible for management of the State's retirement funds. The State's Bond Commission routinely delegates to the Treasurer the responsibility for carrying out the issuance of debt. The Comptroller is required to issue monthly budgetary reports on the State's financial condition, in conjunction with the Office of Policy Management (OPM). OPM is directly responsible to the Governor for policy development in the areas of budget and financial management and prepares the State budget.

Constitutional Provisions

Beginning in November 1992, the State's Constitution provided that the General Assembly must adopt a balanced budget. The Constitution also includes a spending cap on annual growth in expenditures which limits the increase in expenditures to the greater of the five-year average growth in personal income or inflation over the previous year. The cap excludes debt service for general obligation debt and may be exceeded, if the Governor declares a fiscal emergency, by a three-fifths vote of both houses.

General obligation debt is issued under State debt statutes and specific bond authorizations. These statutes provide that the bonds will be general obligations of the State and that the full faith and credit of the State is pledged for repayment. As per the State's contract with the owners of the bonds, all amounts necessary for payment of principal and interest is appropriated without need for legislative approval. There are no express statutory provisions establishing any priorities in favor of general obligation bondholders over other claims against the State. Connecticut is not a voter initiative state.

Bankruptcy

Under Chapter 9 of the U.S. Bankruptcy Code, State governments are not permitted to petition courts for protection from creditors, including holders of their general obligation debt.

Financial Management Policies

The State operates under a strong and comprehensive framework of financial management policies, most of which are codified in statute. The State's framework for financial management includes the following planning and reporting components:

- Monthly Reports on Financial Performance— By statute, OPM is required to provide the State Comptroller with a letter with monthly updates to revenue and expenditure projections for the General Fund in the current fiscal year, along with projections for end of fiscal year surplus or deficits. Based on the OPM letter, the Comptroller prepares a monthly letter on financial performance. Both the OPM and the State Comptroller's monthly letter is available on the state's website. KBRA views the Comptroller's and OPM's monthly monitoring and projection of the year-end financial position as an extremely valuable tool in managing the State's finances.

- Annual Report to Legislature— By statute, each November, OPM and the Office of Fiscal Analysis (OFA) is required to submit a Fiscal Accountability report to the Legislature which projects revenues, expenditures, and ending balances of each fund for the current biennium and the next three fiscal years.

- Three Year Out Report— As part of the budget process, the Governor must annually submit a separate report to the Legislature which sets forth the estimated revenues and expenditures for the current biennium and the next three fiscal years.

- Consensus Revenue Estimates— OPM and the OFA are required by statute to issue consensus revenue estimates each year by November 10, January 15, and April 30 that cover the current biennium and the next three fiscal years. The development of consensus revenue forecasts utilizes both in house analytic staff and external economic forecasting services. Economic trends are monitored and factored into monthly updates on revenue projections

The Treasurer has investment responsibility for all funds of the State and functions as the trustee of all State pension, retirement, and trust funds. The Treasurer is required to report annually on investment activities by December 31 to the Governor and the State's investment Advisory Council.

State Budget Process

The State's fiscal year begins on July 1 and ends on June 30. The State operates on a biennial budget cycle. The FY 2018-FY 2019 biennium commenced on July 1, 2017. The Governor is required to transmit a budget document to the General Assembly in February of odd numbered years setting forth a separate budget for each of the biennium years. Under State Statute, the Governor has the ability to run the State under Executive Order to maintain essential services in the absence of a budget.

In each even numbered year, the Governor must prepare a report (Mid Term Budget Report) on the status of the budget enacted in the previous year with any recommendations on adjustment and revisions for the coming year. All budget recommendations incorporate the consensus revenue estimate process. If a budget surplus or deficit is projected, the Governor will recommend how the deficit will be mitigated or how the surplus will be used. Under the State Constitution, the Governor has the power to veto any line item of any itemized appropriation bill, while at the same time approving the remainder of the bill. The General Assembly may override the Governor's veto by two thirds vote of each legislative house.

Ability to Adjust Expenditures and Deficit Mitigation

Under State statute, the Governor is empowered during the fiscal year to reduce the budget allotment, or expenditure request, by up to 5.0% of any specific appropriation to an agency, except for aid to municipalities, up to 3% of the total appropriations of any fund under certain circumstances without Legislative approval in order to maintain balanced financial operations. Such reductions to expenditures are also referred to as rescissions. Such budget allotments are subject to further modification by the Governor throughout the fiscal year if necessary. Beyond these limits, the General Assembly must act to reduce expenditures.

If the monthly status letter on financial performance issued by the Comptroller indicates a projected General Fund deficit greater than 1% of total General Fund appropriations, the Governor is required within thirty days to submit a report to the General Assembly that outlines a plan that the Governor shall implement to reduce expenditures to prevent a deficit.

Over the last several years, the Governor has adjusted the State's operating budget through the rescission process a number of times in response to projected deficits identified as part of the monthly monitoring of financial performance. The Governor has also developed and submitted deficit mitigation plans to the General Assembly on a timely basis to restore balance to State operations. The State is currently engaged in the development and submission of a deficit mitigation plan in response to revenue shortfalls identified in the November 13, 2017 consensus revenue estimates. KBRA views the ability and demonstrated willingness of the Governor and the General Assembly to use the statutory process to adjust the budget as very positive and indicative of a strong commitment to maintain balanced operations.

Budget Reserve Fund

State statutes dictate that unappropriated surpluses left in the General Fund shall be transferred to the Budget Reserve Fund until the Fund reaches an amount equal to 15.0% of the net General Fund appropriations. The Budget Reserve Fund may only be transferred into the General Fund to fund a deficit in the immediately preceding fiscal year. Transfers may also be made by the General Assembly under specific Circumstances outlined in the recently passed budget act for the FY 2018/FY 2019 biennium.

State Debt Limit

State statutes impose a ceiling on the amount of General Fund supported debt which may be authorized by the Legislature. The limit is 1.6x net General Fund tax receipts as projected by the Finance, Revenue and Bonding Committee of the General Assembly for the fiscal year in which the bonds are authorized. Certain types of debt are excluded from this cap, including cash flow borrowings and emergency financings.

Fiscal Reforms Recently Passed by Connecticut General Assembly

Statutes passed by the General Assembly as part of the FY 2018-FY 2019 budget process established a Municipal Accountability Review Board (MARB) to provide oversight and assistance to municipalities experiencing fiscal distress. Municipalities may apply for assistance or be designated by OPM as needing this support. The budget also includes approximately $28 million in both FY 2018 and FY 2019 for financial assistance for municipalities designated as severely distressed. The budget also includes other fiscal reforms including requirements for certain stress tests on the State's pension funds, a new revenue cap that limits the ability to budget more than a certain percentage of estimated revenues in a budget year, a Revenue Volatility Cap and limits on annual issuance of GO bonds. The new revenue cap requires the General Assembly to reduce budgeted appropriations to 99.5% of estimated revenues in FY 2020, down to 98% of revenue projections by FY 2026. Available funds will be deposited into the Budget Reserve Fund until the Fund reaches an amount equal to 15% of net General Fund appropriations, up from 10%.

The Revenue Volatility Cap requires that estimated and final payments of the personal income tax in excess of $3.15 billion be deposited into the Budget Reserve Fund beginning in FY 2018. Based on the November 2017 consensus revenue estimates, the level of final and estimated taxes for FY 2018 are estimated to be $3.14 billion. In KBRA's view, the establishment of this provision is a positive credit factor which will significantly reduce the budget volatility associated with budgeting final and estimated revenues going forward.

The General Assembly also passed statutes that requires the Treasurer to include many of the statutory provisions discussed above in the pledge in any new GO or revenue bonds issued by the State.

Based on the foregoing, KBRA views Connecticut's management structure, budgeting practices, and policies as being consistent with a AA+ rating.

Rating Determinant 2: Debt and Additional Continuing Obligations

State Tax-Supported Debt

In calculating Connecticut's total state tax-supported debt, we include $18.8 billion of general obligation debt, including this issuance, and $4.9 billion of special tax debt secured by a pledge of transportation related taxes and fees outstanding as of November 1, 2017. In comparison with other states, Connecticut's state tax-supported debt burden is high. These high debt levels result in part from the State's practice of issuing General Obligation debt for certain university projects and for purposes that municipal entities fund in other states, including local school construction. When the aggregate state and local debt levels of the State is compared with other states based on as a percentage of personal income and GSP, debt levels are more in line with its peers.

Summary of Outstanding State of Connecticut Direct General Obligations
Principal Amount Outstanding
($ Thousands)

As of February 15	February-2016	February-2017	November-2017
General Obligation Bonds	13,529,951	14,090,513	14,375,249 [2]
General Obligation Bond Anticipation Notes	-	-	400,000 [2]
Pension Obligation Bonds[3]	2,346,499	2,351,187	2,364,028
UConn 2000 Bonds	1,059,285	1,532,895	1,496,360
Special Tax Obligation Bonds	4,519,700	5,041,800	4,873,400
Other[1]	320,463	326,883	276,553
Gross Direct General Obligation Debt	**$ 21,775,898**	**$ 23,343,278**	**$ 23,785,590**

Source: State of Connecticut Official Statements for General Obligation Refunding Bonds (2016 Series B), General Obligation Bonds (2017 Series A) and General Obligation Refunding Bonds (2016 Series B), and Taxable General Obligation Bonds (2017 A) and General Obligation Bond Anticipation Notes (2017 Series A)

[1] Includes lease financing, tax increment financings, CHFA Supportive Housing Bonds and CHFA Emergency Mortgage Assistance Program Bonds

[2] Includes December 2017 Issuance of Taxable General Obligation Bonds (2017 A) and General Obligation Bond Anticipation Notes (2017 Series A)

[3] Includes accreted value of Capital Appreciation bonds

Connecticut's state tax-supported debt per capita, at $6,623, is the highest nationwide. State tax-supported debt to personal income is high at 9.6% placing it in the top 4% of states in terms of relative debt; however, it drops to the top 40th percentile, when comparing aggregate state and local to other states. While State tax-supported debt per gross state product (GSP) is high at 9.1%, which puts it in the top 2% for all states, this also drops to the top 20th percentile when comparing aggregate state and local debt to other states.

Connecticut Debt as of December 2017			
	Connecticut Current	**Avg of U.S. States, 2016**	**Connecticut 2016 U.S. Percentile**
Tax-Supported Debt per capita	$6,651	$1,599	Top 1%
Aggregate State and Local Debt per capita [2]	$13,094	$8,306	Top 5%
Tax-Supported Debt as a % of Personal Income	9.6%	2.8%	Top 4%
Aggregate State and Local Debt as a % of Personal Income [2]	19.2%	17.5%	Top 40%
Tax-Supported Debt as a % of GSP	9.2%	3.2%	Top 2%
Aggregate State and Local Debt as a % of GSP [2]	18.4%	15.3%	Top 20%

[1] *Source: U.S. Census Bureau, Bureau of Economic Analysis, Credit Scope, and Connecticut Annual Disclosures.*
[2] *Aggregate State and local debt levels are based on FY 2015 numbers from the U.S. Census Bureau*

Connecticut has a relatively small level of exposure to variable rate debt or derivative financings; hence these types of transactions do not pose a significant risk to the State's liquidity position. As of December 1, 2017, the State has $1.64 billion in variable rate General Obligation Bonds, which represents approximately 9% of long term GO debt. Approximately $805 million are SIFMA index based bonds (No put option) and another $735 million are VRDB Bonds. The State has one outstanding GO swap with the notional amount of $20 million. Under the swap agreement, the State controls termination unless its rating falls below the BBB level.

Debt Amortization

Connecticut's debt amortization parameters are conservative, with GO debt generally required to be amortized over 20 years on a level principal basis, which generates a declining debt service schedule. Speed of amortization of direct general obligation debt, is above average with 67% of principal retired over the next 10 years. In FY 2017, debt service on long term direct GO Bonds represented 7.5% of total governmental expenditures (on a GAAP basis) for FY 2016.

Capital Improvement Plan

The State's net new general obligation bond authorizations for capital projects decreased from $2.8 billion in FY 2015 to approximately $1.7 billion in FY 2017 and is further projected to decrease to $1.6 billion in FY 2018 and FY 2019, reflecting the State's ongoing budget pressure. State GO Bond Commission authorizations, which directly reflect level of bond issuance declined from $2.7 billion in FY 2016 to $1.9 billion in FY 2017.

State of Connecticut Retirement Systems

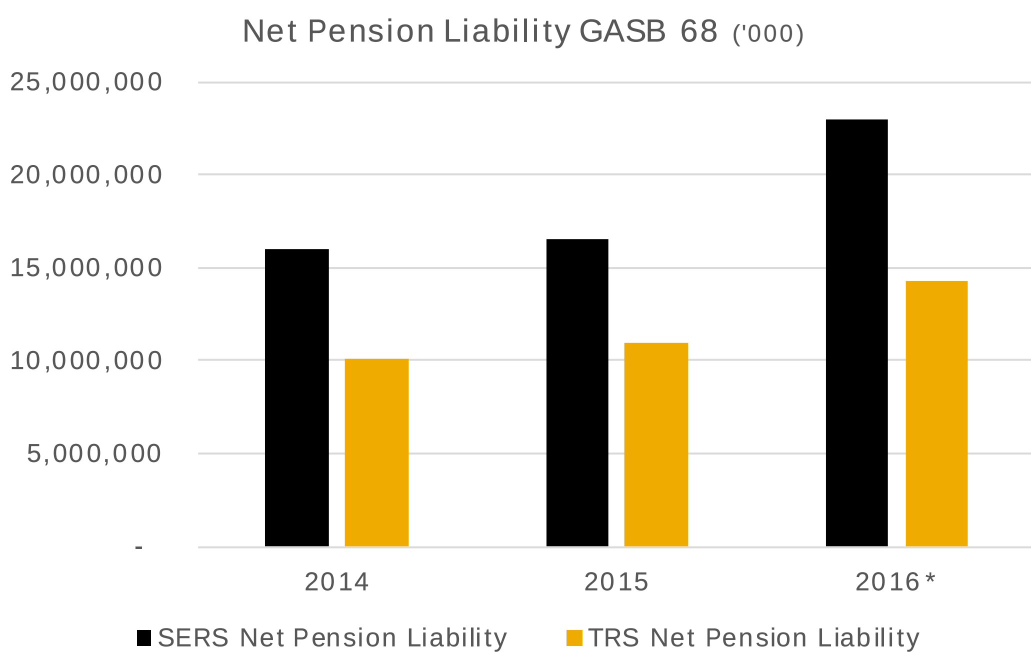
Connecticut administers two major pension plans: The State Employees' Retirement System (SERS) and the State Teachers' Retirement System (STRS). The State's level of funding for its pension plans remains among the lowest for US states. The SERS system covers State employees for which the State makes the entire employer contribution. For the TRS system, Connecticut pays the entire required annual employer contribution to its pension plans on behalf of participating school districts and public universities statewide.

Connecticut Net Pension Liability Rations as of June 30, 2016			
	Connecticut Current	**Avg of U.S. States, 2016**	**Connecticut 2016 U.S. Percentile**
Net Pension Liability Per Capita	$10,404	$1,739	Top 5%
Net Pension Liability as % of Personal Income	15.0%	3.4%	Top 10%
Net Pension Liability as % of GSP	14.3%	3.0%	Top 10%

Source: U.S. Census Bureau, Bureau of Economic Analysis, Credit Scope, and Connecticut Annual Disclosures.

Based on GASB 68 reporting requirements, the combined Net Pension Liability (NPL) for the State's two major pension funds was $37.2 billion. KBRA considers the State's combined NPL to be high compared to other US states based on the ratio of NPL to population, personal income and GSP measures. This combined NPL equates to $7,678 per capita which is in the top 5% for all states. The combined NPL as a percentage of personal income and as a percentage of GSP is also high at 11.1% and 10.6%, respectively and puts the State in the top 10% on both measures for all states.

In FY 2017, the State's combined contribution for its two major pension systems totaled $2.54 billion which represented 8.9% of FY 2016 total governmental expenditures. The State has fully funded the actuarially recommended contribution for the SERS plan since 2012 and on the TRS plan since 2006.



** Discount Rate for SERS decreased from 8.00% to 6.90% and the Discount Rate for TRS decreased from 8.50% to 8.00%*
Source: GASB Statement NO. 68 Report for TRS and SERS 2016-2014

The State's investment return for its two major pension funds for the year ending September 30, 2017 was over 14%. Over the last five years, the average return for both SERS and TRS was 8.8% and the ten-year average return was 6.86% for SERS and 6.98% for TRS.

State Employees' Retirement System (SERS)

In November 2015, OPM released a report by the Boston College Center for Retirement Research which identified certain risks in the State's pension programs which potentially could increase the State's pension contributions significantly in the future. In early 2016, the Governor directed that a study group be convened to develop recommendations on how the funding for pension plans could be restructured and how budgeting uncertainty for pension funding could be reduced for SERS. The State signed a memorandum of understanding with SEBAC in December 2016 which amended certain provisions governing the SERS system. This agreement was approved by the General Assembly on February 1, 2017. Under this agreement charges included: reduction of the assumed rate of return from 8% to 6.9%, extension of the amortization period for the historical unfunded liability by an additional 15 years, setting the amortization of future liabilities at 25 years, adoption of the Entry Age Normal actuarial cost method and changing the methodology for amortizing the unfunded liability to the level dollar method over a five-year period. These changes will reduce the SERS funded ratio and increase pension costs in the short run but will mitigate significant projected spikes in future pension payments and provide the State with a more consistent and predictable schedule of pension contributions in the future. Projected annual SERS pension costs will increase from $1.4 billion in FY 2018 to $2.5 billion in 2023 and then remain stable. The SERS pension valuation as of June 30, 2016 (received in January 2017) reflects these changes.

On July 31, 2017, the General Assembly approved an agreement between the State and SEBAC which made substantial changes to pension and healthcare benefits for State employees and retirees. These changes included a three-year wage freeze, increased employee pension contributions for existing SERS members, reduced COLA formula and change in timing for post 2022 retirees and revisions to the healthcare design plan and cost sharing for current employees. The State agreed to extend the expiration date of the existing agreement with SEBAC on pension and healthcare from 2022 to 2027.

SERS is a single-employer defined benefit pension plan that provides retirement, disability, and death benefits to plan members and their beneficiaries. The plan is funded by employee contributions and monthly State contributions. Full actuarial valuations are performed by a third-party consultant as of June 30- of each even numbered year, with the last full valuation completed as of June 30, 2016. In June 2017, the State received a revised actuarial valuation (as of June 30, 2016) which reflects the terms of the most recent SEBAC agreement. Based on the revised valuation, the funded ratio of the SERS plan, based on actuarial value of assets, was 36.9%, which KBRA considers to be low when compared to industry standards and compared to other states. Since 2012, the actuarial funded ratio has been between 41% and 43%. The decline in the actuarial funded ratio in 2016 reflects, among other changes, the reduction of the investment return assumptions from 8% to 6.9%, which increases the liability levels through reduction in the discount rate. Based on this revised valuation, annual actuarially recommended pension contributions for FY 2018 and FY 2019 are $1.44 and $1.57 billion, respectively. In FY 2017, the annual pension SERS pension contribution was $1.54 billion, which represents 5.4 % of the State's FY 2016 governmental expenditures. The adopted FY 2018-FY 2019 budget fully funds the actuarially recommended pension contributions for both FY 2018 and FY 2019.

Based on GASB 68 reporting requirements, the State reported a Net Pension Liability of $22.96 billion as of June 30, 2016. The ratio of Fiduciary Net position to Total Pension Liability (asset sufficiency ratio) was 31.69%.

Teacher's Retirement System (TRS)

TRS is a single-employer defined benefit pension plan administered by the Teachers' Retirement Board (TRB) for teachers, principals and other education supervisors employed in public school districts. In April 2008, Connecticut issued $2.3 billion in taxable Pension Obligation Bonds (POB) which was deposited into the Teachers' Retirement Fund. As part of the POB issuance, the bond documents included a covenant requiring the State to contribute 100.0% of the actuarially determined employer contribution for the life of the Bonds. The State has fully funded the actuarially recommended pension contribution since FY 2006.

Full actuarial valuations are performed by a third-party consultant as of June 30 of each even numbered year, with the last full valuation completed as of June 30, 2016. Based on the 2016 actuarial valuation, the funded ratio of the TRS plan was 56%, which KBRA considers to be low when compared to industry standards and compared to other states. The adopted budget for FY 2018-FY 2019 increases the employee contribution from 6% to 7% of annual salary; this change is not reflected in in the June 30, 2016 valuation. In 2012 and 2014, the actuarial funded ratio was 55.2% and 59%, respectively. The decline in the actuarial funded ratio in 2016 reflects, among other changes, the reduction of the investment return assumptions from 8.5% to 8%.

Based on this June 30, 2016 valuation, annual actuarially recommended pension contributions for FY 2018 and FY 2019 are $1.29 and $1.33 billion, respectively. In FY 2017, the annual pension TRS pension contribution was $1 billion, which represents 3.5 % of the State's FY 2016 total governmental expenditures. The adopted FY 2018-FY 2019 budget fully funds the actuarially recommended pension contributions for both FY 2018 and FY 2019. The State's annual TRS pension contributions are projected to increase to $2.5 billion in 2032 and then decline.

Based on GASB 68 reporting requirements, the State reported a Net Pension Liability of $14.2 billion as of June 30, 2016. The ratio of Fiduciary Net position to Total Pension Liability (asset sufficiency ratio) was 52.26%.

Other Post-Employment Benefits (OPEB)

Connecticut provides healthcare and life insurance benefits to eligible state employees who retire from State employment. The State funds the cost of these benefits on a pay as you go basis, as do most states, through a transfer from the General Fund to its OPEB trust fund. The OPEB Trust was establishes for the payment of post-retirement benefits and for the accumulation of assets for future payment of retiree benefits. The State has phased in payment by all employees of 3% of annual salary to the OPEB trust fund for a period of ten years. It is not expected that the OPEB trust will contribute a significant amount to funding post-retirement healthcare benefits, although the State's adopted FY 2018-FY 2019 budget includes for each year, in accordance with the 2011 SEBAC agreement, includes an appropriation of $120 million to match State employee contributions to the OPEB trust. Changes related to the most recent SEBAC labor agreement, specifically relating to the implementation of the Medicaid Advantage with Prescription Drug program, is expected to reduce OPEB healthcare liabilities significantly. In FY 2017, the State's contribution to retiree healthcare and life insurance costs was $727.5 million, which represents 2.5% of FY 2016 total governmental expenditures.

The State is required to make appropriations to the Teacher's Retirement Board (TRB) to cover one third of retiree health insurance costs plus any portion that is not funded from amounts available in the Teacher's Insurance Fund. In FY 2017, the State appropriated $19.9 million to subsidize the Teacher's Insurance Fund; this represents a significant decrease from $32.3 million in FY 2013.

Total Fixed Costs

If certain fixed costs are aggregated, including debt service, pension contributions and pay-as-you-go OPEB costs, the total amount paid by the State in FY 2017 represented 18.9% of total governmental expenditures for FY 2016.

Based on the foregoing, KBRA views the State's debt and additional continuing obligations as consistent with an A+ rating determinant rating. The revision in this rating determinant rating from a AA- to A+ reflects KBRA's revisions to its State General Obligation Rating Methodology (published November 1, 2017) rather than a change in the debt and continuing obligations profile of the State. KBRA views Connecticut's direct debt levels pension liabilities as high compared to other states. KBRA also notes that the State has taken action to reduce pension funding levels and mitigate significant projected spikes in future pension payments and so provide the State with a more consistent and predictable schedule of pension contributions in the future.

Rating Determinant 3: Financial Performance and Liquidity Position

FY 2016 Financial Results

Based on the Comptroller's audited budgetary based financial report in November 2017, FY 2016 ended with an operating deficit of $170.4 million in the General Fund, which was eliminated by a transfer from the Budget Reserve Fund (BRF). As a result of this transfer, the balance in the BRF was reduced from $406 million to $235.6 million, or 1.3% of FY 2016 expenditures, which KBRA considers to be low. This outcome is largely the result of a significant shortfall in personal income tax collections totaling $654 million, or 7.1% below the FY 2016 budget. These FY 2016 shortfalls stem from the State's ongoing difficulty in projecting the level of capital gains taxes to be collected as well as lower than expected receipts of withholding taxes, which reflects lower than anticipated wage growth in the labor force.

In FY 2016, the economic growth rate (not reflecting revenue enhancements) for the withholding portion of personal income taxes was 2.8% and the economic growth rate for the final and estimated portion was a negative 7.6%, compared to FY 2016 budget projections of 5.2% and 7.1% growth in withholding and estimated and final collections, respectively. Sales tax revenues increased at an economic growth rate of 2.8% in FY 2016.

General Fund Revenues for FY 2012 - FY 2017 (budgetary / modified cash basis)												
	2017	% Chg	2016	% Chg	2015	% Chg	2014	% Chg	2013	% Chg	2012	% Chg
Personal Income Tax	8,988,667	-2.1%	9,181,648	0.3%	9,151,037	5.0%	8,718,659	0.0%	8,719,245	4.9%	8,310,820	14.7%
Federal Grants	1,325,237	1.8%	1,301,532	4.9%	1,241,244	-0.2%	1,243,861	-66.7%	3,733,909	3.5%	3,607,163	-14.8%
Sales and Use Tax	4,192,203	0.2%	4,181,852	-0.6%	4,205,051	2.5%	4,100,564	5.2%	3,896,998	1.7%	3,830,117	14.2%
Corporate Income Tax	1,037,565	17.8%	880,449	8.1%	814,805	4.2%	782,239	5.3%	742,515	3.6%	716,522	-9.8%
Excise Taxes (Alcohol & Cigarettes)	444,610	1.8%	436,631	3.9%	420,355	-3.9%	437,479	-4.9%	460,228	-4.4%	481,600	6.3%
Indian Gaming Payments	269,906	1.5%	265,907	-0.8%	267,986	-4.2%	279,873	-5.6%	296,396	-14.0%	344,645	-4.2%
Statutory Transfers From Other Funds	118,299	-33.5%	177,853	31.4%	135,313	-84.5%	873,828	747.6%	103,100	7.3%	96,100	-54.5%
Other	1,326,482	-2.1%	1,354,950	29.5%	1,046,248	82.6%	573,053	-60.6%	1,452,640	23.7%	1,174,666	11.4%
Total Revenues	**17,702,968**	**-0.4%**	**17,780,822**	**2.9%**	**17,282,038**	**1.6%**	**17,009,556**	**-12.3%**	**19,405,031**	**4.5%**	**18,561,633**	**4.8%**
General Fund Expenditures for FY 2011 - FY 2017 (budgetary / modified cash basis)												
	2017	**% Chg**	**2016**	**% Chg**	**2015**	**% Chg**	**2014**	**% Chg**	**2013**	**% of Chg**	**2012**	**% of Chg**
General Government	584,707	-6.8%	627,035	-5.1%	660,999	9.1%	605,677	2.1%	593,367	-2.6%	609,239	28.0%
Public Safety	274,414	-4.9%	288,554	0.5%	287,251	3.4%	277,873	6.1%	261,787	-0.4%	262,898	0.4%
Conservation and Development	181,061	-7.1%	194,878	-5.3%	205,811	-6.8%	220,921	66.0%	133,083	-3.1%	137,294	10.8%
Health and Hospitals	1,189,787	-32.6%	1,765,944	-1.1%	1,785,337	-2.3%	1,827,308	1.4%	1,801,951	0.5%	1,792,435	4.5%
Human Services	3,624,957	16.9%	3,102,021	0.2%	3,095,929	-3.7%	3,215,827	-45.8%	5,931,567	2.0%	5,817,369	8.0%
Education, Libraries and Museums	5,003,922	-2.3%	5,122,028	1.9%	5,025,391	7.0%	4,695,345	8.5%	4,328,894	2.2%	4,235,428	4.3%
Corrections and Judicial	1,949,483	-5.4%	2,060,650	-0.5%	2,070,067	2.3%	2,023,498	4.1%	1,943,273	-3.9%	2,021,335	-1.1%
Debt Service	1,934,529	5.7%	1,830,910	17.8%	1,553,732	-5.6%	1,646,149	-8.5%	1,799,937	-0.5%	1,809,201	11.0%
Other	3,020,180	3.1%	2,929,238	7.1%	2,735,173	10.9%	2,467,444	10.6%	2,231,808	6.5%	2,096,435	-2.3%
Total Expenditures	**17,763,040**	**-0.9%**	**17,921,258**	**2.9%**	**$17,419,689**	**2.6%**	**$16,980,042**	**-10.8%**	**$19,025,667**	**1.3%**	**$18,781,634**	**5.2%**

Source: Annual Report of the State Comptroller 2017-2012

Statement of Revenues, Expenditures, and Net Surplus for General Fund General Fund (budgetary modified cash basis) FY 2012-2017 (ending June 30)						
(in $ millions)	**2017**	**2016**	**2015**	**2014**	**2013**	**2012**
Operating Revenues	17,703.0	17,781	17,282.0	17,009.1 [1,2]	19,405.0	18,561.6
Operating Expenditures	17,763.0	17,921.3	17,419.7	16,980.0	19,025.7	18,781.6
Other Resources	37.4	-30.0	24.5	28.7	18.7	76.5
Net Operating Surplus (Deficit)	(22.7)	(170.4)	(113.2)	57.7	398.0	(143.6)
Transfer (to) from Budget Reserve Fund	22.7	170.4	113.2	(248.5)	(177.2)	143.6
Reserved for Subsequent Years Expenditure	0	0	0	0.0	220.8	0.0
Reserved from Prior Year Resources	0	0	0	190.8	0.0	0.0
Net Surplus (Deficit) June 30th	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Budget Reserve Fund	**$212.9**	**$235.6**	**$406.0**	**$519.2**	**$270.7**	**$93.5**
% of Operating Expenditures	**1.2%**	**1.3%**	**2.3%**	**3.1%**	**1.4%**	**0.5%**

Source: Annual Report of the State Comprtoller 2017-2012

[1] FY 2014 General Fund revenues and expenditures reflect the reduction of approximately $2.8 billion in both revenues and expenditures related to the shift to the "net budgetary" approach in Medicaid funds.
[2] FY 2014 revenues do not include $599 million of GAAP Conversion Bonds

FY 2017 Financial Results

Based on the Comptroller's audited budgetary based financial report for FY 2017, FY 2017 ended with an operating deficit of $22.7 million in the General Fund, which was eliminated by a transfer from the Budget Reserve Fund (BRF). As a result of this transfer, the balance in the BRF was reduced from $235.6 million to $212.9 million, or 1.1% of FY 2017 expenditures, which KBRA considers to be low, especially given the volatility of the State's income tax collections. In FY 2017, the state experienced a significant shortfall in personal income tax collections totaling $530 million (6% below budget) and a shortfall in sales tax revenue of $136.5 million (3.2% below budget).

These FY 2017 shortfalls are due to lower than anticipated revenues for both withholding taxes and final and estimated taxes, which include capital gains tax, as well as sales tax revenues. The shortfalls reflect the State's ongoing difficulty in projecting the level of final and estimated taxes as well as lower than anticipated wage growth in the labor force and generally slower growth in the state economy. April 2017 collections of personal income taxes were significantly lower that expected and led to a projection of a significant operating deficit in the General Fund at the end of FY 2017. FY 2017 ended with a rather modest operating deficit of $22.7 million and minimal drawdown of the Budget Reserve Fund due to revenue transfers and expenditure reductions under the deficit mitigation plan submitted by the Governor to the Legislature on May 10, 2017. It is notable that significant expenditure action was able to be implemented so close to the end of the fiscal year.

Due to these revenue shortfalls, total FY 2017 General Fund revenues showed an absolute decline of 0.4% and a decline of 2.1% in total personal income tax revenues from FY 2016 to FY 2017. In FY 2017, the actual economic growth rate (which does not reflect revenue enhancements or policy changes) for the withholding portion of personal income taxes was 1.3% and the economic growth rate for the final and estimated portion was a negative 7.8%, compared to FY 2017 budget projections of 3.3% and 2.0% growth in withholding and estimated and final collections, respectively. Sales tax revenues increased at an economic growth rate of .9% in FY 2017, compared to budget projections of 3.2%. The economic growth rate for total General Fund revenues was .9%, as compared to budget projections of 3.7%.

The growth rates for withholding taxes in Connecticut have averaged been in the range of 3%-4% since 2012 with a slight decline to 2.8% in 2016. The 2017 growth rate of 1.3% reflects a significant slowdown in wage growth from the last several years. The sales tax growth rate of .9% in FY 2017 is also reflective of economic slowdown, in comparison to growth rates of 3.9% in FY 2015 and 2.6% in FY 2016. Annual collections of estimated and final income tax collections have fluctuated significantly with annual declines of over 6% in FY 2012 and FY 2014 and annual increase of 22% and 10% in FY 2013 and FY 2015, respectively. In FY 2016, actual collections of final and estimated personal income taxes declined 7.6%, which was followed by the 7.8% decline in FY 2017. Along with other high wealth states, the State has found it difficult to project the level of estimated and final income taxes and actual collections have been lower than budgeted levels in five out of six years since 2012.

Capital gains tax collections reflect capital gains taken in the immediately preceding fiscal year and collections are impacted by financial market performance and taxpayer decisions on the sale of securities. The stock market showed strong performance in 2016, however the run up did not translate to an increase in capital gains taxes for the State. It seems likely that the expectation of tax law changes on the federal level will impacted decisions on capital gains taken in 2016. Other possible reasons include the increasing use of Exchange Traded Funds (ETFs) which are designed, in part, to minimize capital gains and increasingly sophisticated investment vehicles designed to shelter income.

In FY 2017, personal income taxes accounted for 51% of the State's General Fund revenues. Historically, withholding taxes represents 70% (on average over the past 20 years) of total personal income tax collections with estimated and final payments representing the balance. Estimated and final personal income tax collections include taxes on capital gains, dividends and bonuses as well as estimated personal income tax payments. On average, capital gains taxes comprise 9% of adjusted gross income in the State, or approximately a third of estimated and final payments.

Available Cash Balance as of June 30 (In Millions)

	2014	2015	2016	2017
Common Cash Pool	$941.1	$1,091.5	$821.0	$1,100.6
Total Available Cash	$1,780.8	$2,218.3	$1,764.8	$2,657.0

Source: State of Connecticut Treasurer's Office Cash & Debt Monthly Reports

Liquidity Position

The State's liquidity position remains strong. As of June 30, 2017, the State's available cash was $ 2.7 billion, and the common cash pool was $ 1.1 billion. The common cash pool represents the state's operating cash. Available cash includes bond funds and other balances which can be made available to the common cash pool through temporary transfers under long established state practice.

The State's level of cash in the common cash pool at a given point in the fiscal year reflects the seasonality of cash flow. The level of total available cash is impacted both by the rate of bond issuance and the rate of spending from those bond funds. Based on analysis of the State's monthly cash flow projections, KBRA notes that the actual total available cash monthly balances for FY 2018 to date exceed the State's monthly cash balance projections during a period when the State's revenue collection and bond issuance was limited by the lack of a budget. The State has no plans to issue cash flow notes.

GAAP Financial Statements

The Office of the State Comptroller released the FY 2016 audited financial statement (CAFR) on December 30, 2016.For FY 2016, the General Fund ended the year with a negative unassigned fund balance (accumulated GAAP deficit) of $998.9 million.

FY 2018 and FY 2019 Biennium Adopted Budget

On February 8, 2017, the Governor presented his proposed FY 2018/FY 2019 biennium budget to the General Assembly. The baseline biennium budget for the General Fund included a gap of $1.7 billion in FY 2018 and $1.9 billion in FY 2019. The Governor's budget closed these budget gaps through a combination of revenue enhancements and expenditure reductions. The spending reductions were largely structural in nature and the revenue enhancements did not raise the major State taxes. For FY 2018 and FY 2019, the proposed budget included savings resulting from the SEBAC collective bargaining savings, implementation of municipal cost sharing of pension costs for the Teacher's Retirement System and adjustments to municipal aid. On the revenue side, the proposed budget included elimination of a property tax credit, decrease in the earned income tax credit (EITC), increase in cigarette taxes, modification of State gift and estate taxes, suspension of the transfer of sales tax revenues into the Municipal Revenue Sharing Account(MSRA), and changes to the tax structure for hospitals. In KBRA's view, the Governor's proposed budget reflected a positive effort to partially restructure the State's finances by increasing allocation of costs to local governments based on contraction in the State's revenue base.

The General Assembly failed to pass a budget for the FY 2018-FY 2019 biennium before the start of the 2018 fiscal year on July 1, 2017. Under State Statute, the Governor has the ability to run the State under Executive Order to maintain essential services in the absence of a budget. The FY 2018-FY 2019 biennium budget was finally adopted on October 30, 2017 after a long budget negotiation in the General Assembly and signed into law by the Governor on October 31, 2017. Generally, based on conversations with OPM, the adopted biennium budget is tightly balanced with limited room for budget overruns on the expenditure side. In KBRA's view, the adopted biennium budget is not structurally balanced based on use of a substantial level of non-recurring revenues sources, which include transfers from State operating funds as well as a number of revenue enhancements and tax cuts that are scheduled to expire in FY 2020. Though the adopted budget does include a reduction in local education funding, it does not include a structural shift of cost sharing to local government. The FY 2018 and FY 2019 General Fund appropriations total $18.7 and 18.8 billion respectively.

On the revenue side, the adopted budget reflects many the same items in the Governor's proposed budget, including property tax credits, decrease in the earned income tax credit (EITC), increase in cigarette taxes, the suspension of the transfer of sales tax revenues into the MSRA. Hospital provider taxes are significantly increased, however a portion of the hospital tax payments will be returned to the hospital as supplemental payments, thereby increasing federal Medicaid reimbursement and thus creating a financial benefit for both the State and the hospital industry. The budget also includes an increase in the State teachers' contribution to pension costs from 6% to 7% of annual salary.

Non-recurring revenues in the form of transfers from a number of State operating funds total $173 million in FY 2018 and $213 million in FY 2018. The major transfers include a delay in payment of the GAAP deficit amortization and use of certain operating funds from the State's Energy Efficiency Funds for this biennium.

In addition to transfers from State operating funds, the adopted budget includes revenue enhancements and tax cuts that are scheduled to expire in FY 2020. The impact of these combined transfers and items scheduled for expiration would total $1.2 billion in FY 2020. Reflected in this number is the restoration of the sales tax transfers to the MSRA, the assumption (made by OPM) that the hospital tax will be reduced by half and restoration of the full property tax credit as well as other items.

On the expenditure side, the adopted FY 2018-FY 2019 budget includes the savings from the SEBAC collective bargaining agreement approved by the General Assembly in July 2017, reduction in state aid for education (ECS) and school health centers, reduction in funding for higher education, cuts to child care subsidies and cuts to the state's Medicaid program. The budget also includes $112 million in 2018 ($150 million in 2019) in unallocated spending cuts that the Executive branch must determine how to implement. The major driver of spending reductions in the FY 2018-FY 2019 adopted budget is the collective bargaining savings, estimated at $700 million in FY 2018 and $868 million in FY 2019, included in the five-year extension of the labor contract with the State employees' union (SEBAC). The agreement would freeze all State employee wages over the next three years, increase employee pension and healthcare contributions and make other changes to reduce costs in both the State retirement and healthcare plans. COLA payments and scheduled wage increases resume in FY 2020. The State has also agreed not to lay off any unionized State employees over the next four fiscal years which, in KBRA's view, will limit the State's options for managing its budget in the current biennium and beyond.

In addition to transfers from State operating funds, the adopted budget includes revenue enhancements and tax cuts that are scheduled to expire in FY 2020. The combined transfers and items scheduled for reversion total $1.2 billion in FY 2018 and $1.7 billion in FY 2019.Reflected in this number is the restoration of the sales tax transfers to the MSRA, the assumption (made by OPM) that the hospital tax will be reduced by half and restoration of the full property tax credit as well as other items.

The Office of Fiscal Analysis (OFA) and OPM generally develop a projection of the impact of an adopted biennium budget beyond the biennium (Three Year Out report. Based on OFA assessment of the FY 2018-FY 2019 budget impact, the budget gap for FY 2020 is projected at $1.9 billion and FY 2021 and FY 2022 is projected at $2.7 billion and $3.2 billion, respectively.

In the FY 2018-FY 2019 biennium budget adopted by the General Assembly on October 30, 2017, budgeted revenues levels were based on the May 1, 2017 consensus revenue estimates. Based on these estimates, the economic growth rate for total General Fund revenues was projected to be .9% in FY 2018 and .6% in FY 2019. Economic growth rates for the withholding portion of the personal income tax were projected at 2.1% in FY 2018 and 2.1% in FY 2019. Final and estimated income taxes were projected to be flat in FY 2018 and to grow 1% in FY 2019, and sales taxes were projected to grow 2.9% and 2.4%%, respectively, in FY 2018 and FY 2019. Since budget adoption, the November 2017 consensus revenue estimate have been released and General Fund revenue estimates have been revised downwards, as discussed below.

Based on discussions with OPM, the risk areas on the expenditure side of the FY 2018-FY 2019 biennium budget include the challenge facing the State in achieving budgeted saving levels in the areas of personnel expenditures, given the limits on layoffs included in the SEBAC agreement. Another risk area is the ability of the State to maintain compliance in staffing and provision of services related to certain legal consent decrees in the area of social services given cuts in spending. OPM also noted that the tight budget limits the flexibility of the State to meet any unforeseen expenses. As discussed above, the FY 2018-FY 2019 biennium budget also includes a significant level of non-recurring revenues which are scheduled to end in FY 2010.

FY 2018 Financial Operations

Based on its letter dated November 20,2017, OPM is projecting a $202.8 million deficit in the General Fund, slightly more than one percent of net General Fund appropriations for the fiscal year that began on July 1, 2017. A projected deficit at this level triggers the process of development and submission of a deficit mitigation plan by the Governor to the General Assembly. The November 20 OPM letter reflects the adopted FY 2018-FY 2019 budget provisions and the new consensus revenue estimates that were released on November 13, 2017. These new revenue estimates result in General Fund revenues being revised downward by $227 million compared to the adopted FY 2018-FY 2019 budget. The largest decline was in federal grants based on the final reconciliation process for payments for medical services for the second half of 2017. Net income tax revenues have been revised downward by 34.1 million and sales tax revenue has been revised downwards by $70 million.

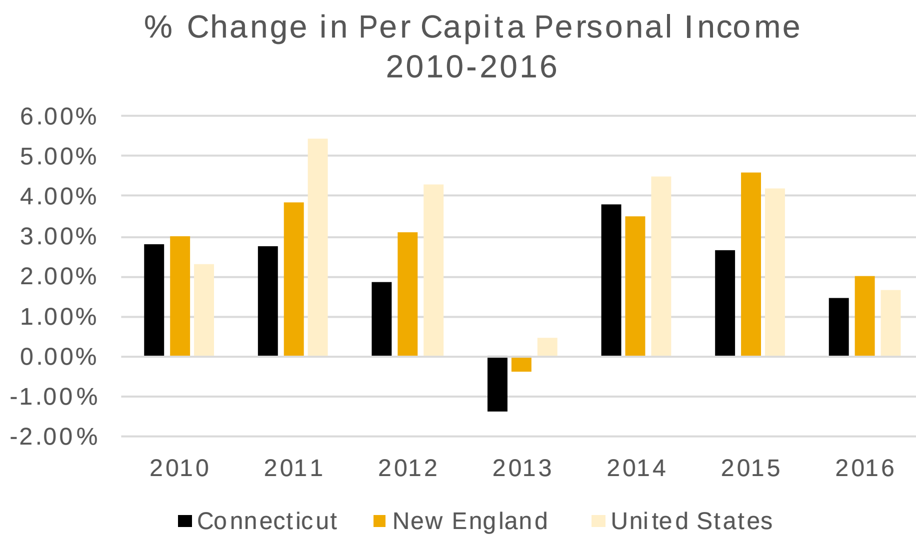
Based on the November 13 consensus revenue estimates, the economic growth rate for total General Fund revenues was projected to be a negative .6% in FY 2018 and to grow 0.4% in FY 2019. Sales taxes are projected to grow 1.2% and 2.5%, respectively, in FY 2018 and FY 2019. Economic growth rates for the withholding portion of the personal income tax are now projected at 2.1% in FY 2018 and 2.2% in FY 2019.

Final and estimated income taxes are projected to decline 1.5% in FY 2018 and grow 0.7% in FY 2019. OPM also noted in the November 20 letter that the first three estimated income tax payments for income year 2017 have come in over 6% below target, compared to prior year estimated payments. The underperformance of the estimated income tax revenues has not been reflected in the November consensus revenue estimates; it is expected that receipt of the fourth estimated payment by early January will provide more meaningful information for projection. Currently, approximately 20% of projected revenues from estimated payments have been collected. OPM also notes that that these revenue estimates could be further impacted by changes in taxpayer behavior due to the changes in federal tax law. In KBRA's view, the State's current revenue projections, based on the November 2017 consensus revenue estimates, are fairly conservative, though, as discussed above, there exists the possibility of further revisions. KBRA will continue to monitor the State's revenue performance and the impact on the State's financial operations.

Based on the foregoing, KBRA views the State's financial performance and liquidity as being consistent with an A+ rating determinant rating.

Rating Determinant 4: State Resource Base

In KBRA's view, the State economy continues to grow but at a slower pace than regional and national growth trends. From 2010 to 2016 the State's population has been flat, while the New England region and nation has grown by 1.9% and 4.5% respectively. Going forward, KBRA expects that Connecticut's population growth will continue to be slower than that for New England and the U.S.



Source: Bureau of Economic Analysis

Income levels, as measured by per capita personal income, have historically been the highest in the nation. Per capita personal income in 2016 was $69,311, which was 113.1% and 140.7% of New England and U.S. levels, respectively. Over the last twenty years, the State's high per capita personal income figure has historically been driven, in part, by the relatively large proportion of residents who work in high paying jobs in the finance, insurance, real estate, and certain manufacturing (such as defense) sectors. The State 's per capita income is still the highest in the nation, but the rate of growth has slowed. Since 2010, Connecticut's per capita personal income has grown by 14.7% while the region and nation has seen higher growth rates of over 20%. This is reflective of losses of many financial sector jobs in the State which have decreased by 3.8% since 2010. Historically, declines in personal income growth have generally been steeper in Connecticut than the region and the U.S. during periods of economic decline.

	2016 Population	Chg. from 2010	2016 Age Dependency Ratio [1,2]	Chg. from 2010	2016 Population w/ B.A. Degree or Higher [2,4]	Chg. from 2010	2016 Poverty Level [2]	Chg. from 2010
Connecticut	3,576,452	0.0%	59.8%	1.0%	38.6%	3.1%	9.8%	-0.3%
New England	14,735,525	1.9%	57.7%	1.6%	39.1%	3.5%	10.4%	-0.8%
United States	323,127,515	4.5%	61.3%	2.5%	31.3%	3.1%	14.0%	-1.3%
Connecticut as % of New England	N/A		103.6%		98.8%		94.2%	
Connecticut as % of U.S.	N/A		97.4%		123.3%		70.0%	

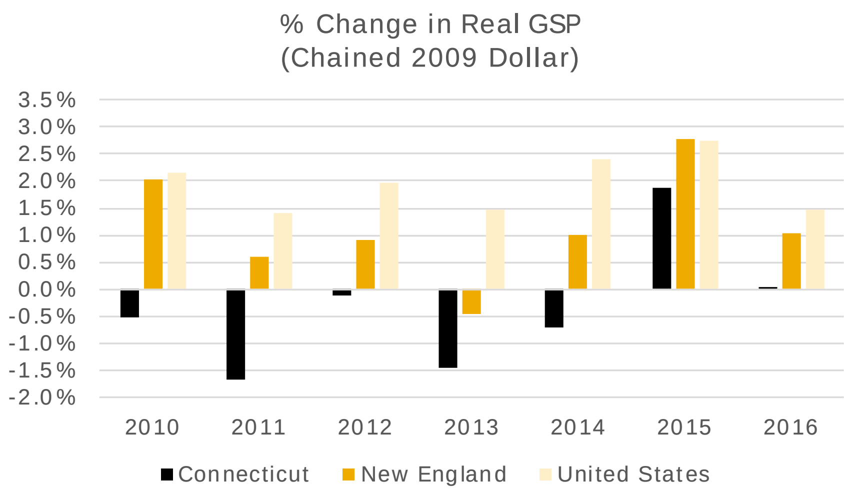
Source: U.S. Census Bureau

	2016 Personal Income ($ Billions)	Chg. from 2010	2016 Per Capita Personal Income	Chg. from 2010	2016 Real Gross State Product ($Billions)	Chg. from 2010	2016 Real GSP Per Capita	Chg. from 2010
Connecticut	$247.9	15.2%	$69,311	14.7%	$227.6	-2.1%	$63,636	-2.9%
New England	$903.3	24.1%	$61,299	21.3%	$870.6	6.0%	$59,079	3.1%
United States	$15,912.8	31.7%	$49,246	25.1%	$16,385.2	12.0%	$50,708	5.6%
Connecticut as % of New England	N/A		113.1%		N/A		107.7%	
Connecticut as % of U.S.	N/A		140.7%		N/A		125.5%	

Source: Bureau of Economic Analysis

[1] *Age dependency ratio is the sum of the population under 18 yrs and over 65 yrs divided by persons age 18 to 64 yrs.*
[2] *Year over year change shown as nominal change in percentage points.*
[3] *New England is defined as Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont*
[4] *Percent of the population aged 25 and over.*

Overall, Connecticut's real GSP has decreased by 2.1% since 2010 while the GSP of the region and nations grew during the same period. Since 2014, the State's real GSP has grown by approximately 2.0%.

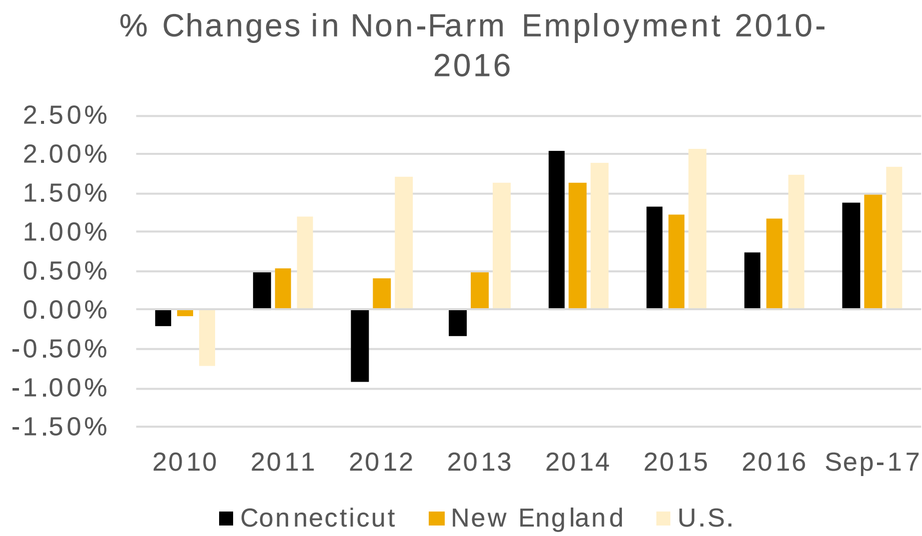


Source: Bureau of Economic Analysis

The State continues to have a fairly diverse economic base. In 2017, eighteen "Fortune 500" companies were headquartered in Connecticut, including United Technologies Corporation ("UTC"), Cigna, Praxair, Priceline Group and Hartford Financial Service Group. KBRA notes that the defense industry, which comprises about one-quarter of the State's manufacturing employees, is an important component of the State's economy and has demonstrated renewed strength since 2002 we expect this trend to continue. Major defense companies include United Technologies Corporation and its Pratt and Whitney Aircraft Division, Sikorsky Aircraft (a division of Lockheed Martin), and General Dynamics Corporation's Electric Boat Division. In September 2016, Governor Malloy announced that Sikorsky Aircraft would remain headquartered in the State for at least another 16 years.

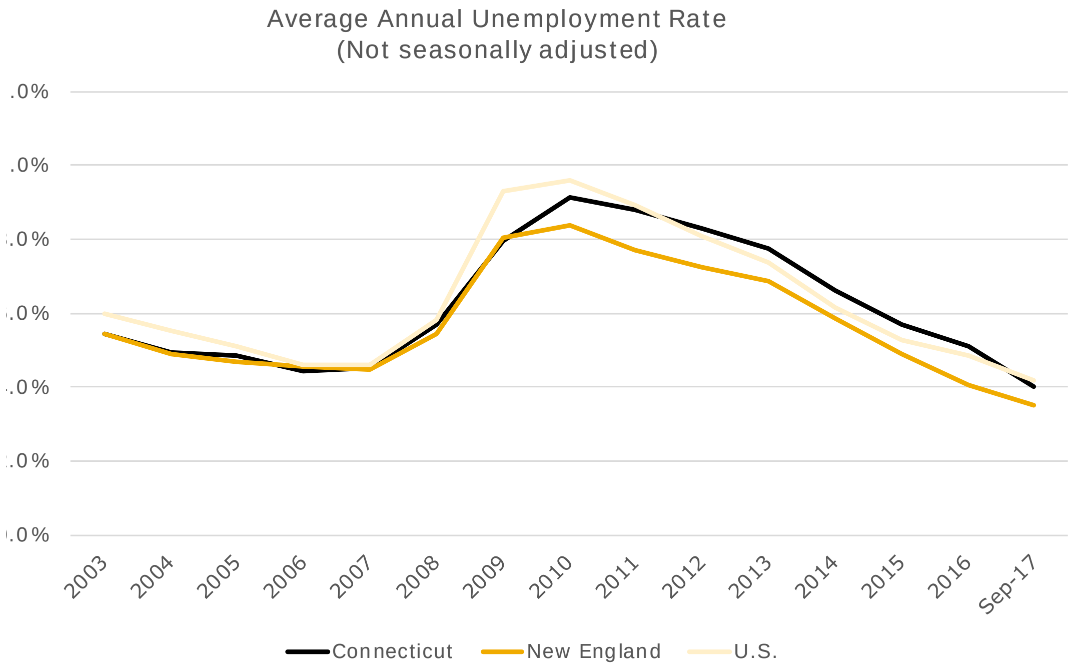
In the summer of 2017, Aetna announced that it was moving its headquarters and 250 jobs from the state to New York City. General Electric moved its headquarters in 2016 to Boston after moving to Connecticut in the 1970s. Other companies that have historically been in the State such as the Hartford Financial Services Group have stated their continued commitment to the State.

Since 2010, the State has also generally lagged the New England region and the United States in growth in total employment and reduction of the unemployment rate. Between 2010 and 2016, total State employment grew 3.3%, as compared to 5.6% for the region and 10.7% for the US. Connecticut's employment gains reflect the continued slow growth of the State's economy.



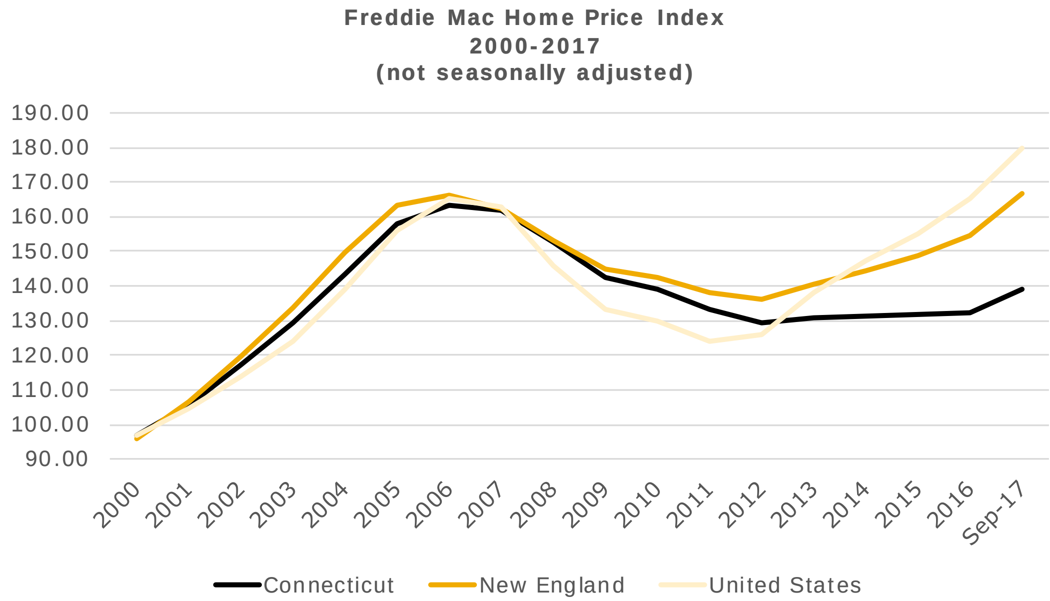
Source Bureau of Labor Statistic

Despite the continued decline of the State's average unemployment rate from a peak of 9.1% in 2010 to 5.1% in 2016, the unemployment rate in Connecticut is still above that of the region and U.S., which averaged 4.1% and 4.9% in 2016, respectively. As of September 2017, the State's unemployment rate is 4.0% compared to 3.5% for the New England region and 4.2% nationwide.



Source: U.S. Bureau of Labor Statistics

The State's housing market began to recover in 2013, according to the Freddie Mac Home Price Index and, as of September 2017, represents 85.1% of its pre-recession peak.



Source Freddie Mac Home Price Index

Based on the foregoing, KBRA views the State of Connecticut's resource base as consistent with a AA-rating.

Conclusion

KBRA has assigned a long-term rating of AA- with a Negative outlook to the State of Connecticut's Taxable General Obligation Bonds (2017 Series A) and a short-term rating of K1+ to the General Obligation Bond Anticipation Notes (2017 Series A). Additionally, KBRA has affirmed the long-term rating of AA- with a Negative outlook on the State of Connecticut's outstanding General Obligation Bonds. KBRA has also affirmed the long-term rating of AA- with a Negative outlook on the State of Connecticut General Fund Obligation Bonds 2014 Series A issued by Connecticut Innovations, Inc.