

# Connecticut's Fiscal Guardrails: A Data-Driven Analysis

## Introduction to the Series

ZACHARY LISCOW *Yale Law School*

LUKE BRONIN *Yale Law School / The Connecticut Project*

NATHANAEL MCLAUGHLIN *Tobin Center for Economic Policy at Yale University*

PATRICK J. MURPHY *University of San Francisco*

MOHIT AGRAWAL *Yale Department of Economics*

ELIZA MCKENNEY *Tobin Center for Economic Policy at Yale University*

DECEMBER 2024

A joint research effort between [The Tobin Center for Economic Policy](#)  
and [The Connecticut Project](#)

Copyright © Yale University. All rights reserved.

## CONTRIBUTORS

ZACHARY LISCOW *Yale Law School*

Zachary Liscow is professor of law at Yale Law School, served as chief economist at the Office of Management and Budget at the White House from 2022–2023, and was a staff economist at the White House Council of Economic Advisers from 2009–2010. Liscow earned his PhD in economics from the University of California, Berkeley, and his JD from Yale Law School, as well as a degree in economics and in environmental science and public policy from Harvard College.

LUKE BRONIN *Visiting Lecturer in Law, Yale Law School / The Connecticut Project*

Luke Bronin is a visiting lecturer in law, senior research scholar in law, and Tsai leadership senior distinguished fellow in residence at Yale Law School and most recently served two terms as Mayor of Hartford, Connecticut. Bronin was general counsel to then-governor of Connecticut Dannel P. Malloy from 2013–2015 and prior to that served in the Obama administration at the US Department of the Treasury. Bronin was an officer in the US Navy Reserve. Bronin received a BA from Yale College, an MSc from the University of Oxford, and a JD from Yale Law School.

NATHANAEL MCLAUGHLIN *Policy Fellow, Tobin Center for Economic Policy at Yale*

Nat McLaughlin is a policy fellow at the Tobin Center for Economic Policy, previously held the role of policy advisor to Connecticut's Chief Budget Officer, and also served as a naval officer. McLaughlin holds an MA in global affairs and an MBA from Yale University, a Master's in national defense and security studies from the US Naval War College, and a BS in industrial engineering from Northwestern University.

PATRICK J. MURPHY *Professor, University of San Francisco*

Patrick J. Murphy is a professor and faculty director for the Urban and Public Affairs program at the University of San Francisco. He currently serves as the director of resource equity and public finance for The Opportunity Institute. Previously, Murphy worked at the US Office of Management and Budget, as a consultant for state and local government, and at Arnold Ventures. Murphy received a BA from the University of Notre Dame, an MPA from the University of Texas-Austin, and a PhD and MA from the University of Wisconsin-Madison.

MOHIT AGRAWAL *PhD Candidate, Yale Department of Economics*

Mohit Agrawal is an applied microeconomist and a fourth-year PhD candidate in economics, a graduate policy fellow at Yale's Institute for Social and Policy Studies, and a visiting scholar at University of Chicago's Becker Friedman Institute. Agrawal served as deputy policy director and advisor to Governor Ned Lamont of Connecticut from 2019–2021. He received his BA in mathematics from Princeton University, and an MSc in applied statistics, as well as an MBA, from the University of Oxford.

ELIZA MCKENNEY *Research & Policy Program Manager, Tobin Center for Economic Policy at Yale*

Eliza McKenney is a research and policy program manager at the Tobin Center for Economic Policy. Prior to joining the Tobin Center, McKenney worked in economic consulting at Cornerstone Research where she collaborated with leading economic and financial academics. McKenney holds a BBA in finance and a BA in psychology from the College of William & Mary.

In the decade following the 2007–2008 global financial crisis and the ensuing Great Recession, the state of Connecticut experienced what a former secretary of the Office of Policy and Management described in 2014 as a state of “permanent fiscal crisis.”<sup>1</sup> Despite increases to state sales and income taxes in 2011 and 2015, Connecticut’s revenues repeatedly fell short of projections, requiring multiple years of funding reductions and mid-year rescissions.

Between 2008 and 2018, Connecticut adopted a series of responsible budgeting practices, including a transition to GAAP accounting and a commitment to fully funding the actuarially required contributions to state’s pension funds, a practice recommended by the Society of Actuaries Blue Ribbon Panel.<sup>2</sup> These measures put additional pressures on Connecticut’s strained budget, as the state sought to correct the mistakes of decades past. However, it was the decade-long economic recovery and substantial volatility in critical revenue sources that led to a period of profound and sustained fiscal uncertainty between 2008 and 2018.

In 2017, in response to the years of shortfalls, midyear deficit projections, and declining confidence in Connecticut’s fiscal future, the General Assembly enacted a set of “fiscal guardrails” intended to constrain future spending and ensure responsible future budgeting practices. These measures included (1) a revised *spending cap*, which tightened an existing restriction on annual increases to appropriations; (2) a *volatility cap*, which limited the amount of revenue the state could appropriate from its most volatile revenue sources; (3) a *revenue cap*, which limited the amount of projected revenue available for appropriation, requiring a “cushion” to be built into every budget; and (4) *bonding caps*, which limited the amount that the state could borrow or allocate on the state bond agenda.

To bind the hands of future legislatures, the statute passed in 2017 also included a so-called bond lock provision, requiring the Treasurer to include covenants in new bond issuances pledging that Connecticut would maintain the guardrails, subject to certain conditions.

Together, these caps represent a broad and overlapping set of budget controls. Their adoption coincided with an accelerating economic recovery and, during and following the COVID-19 pandemic, a substantial increase in revenues from multiple sources. As a result, the fiscal guardrails have helped Connecticut to build a Budget Reserve Fund, or “rainy day fund,” currently at its statutorily allowed maximum of \$4.1 billion, or 18 percent of the General Fund budget.<sup>3</sup> The guardrails have also helped Connecticut to avoid the operating deficits requiring midyear or mid-biennium cuts that had become common in the previous decade.

1 “Sen. Harding: Abandoning Fiscal Discipline Will Return CT to ‘Permanent Fiscal Crisis,’” State Senator Stephen Harding, Connecticut Senate Republicans, 2024, <https://ctsenaterepublicans.com/2024/08/sen-harding-abandoning-fiscal-discipline-will-return-ct-to-permanent-fiscal-crisis/>.

2 “Implementation of Generally Accepted Accounting Principles,” Laura Cummings, Legislative Fellow, 2009, <https://www.cga.ct.gov/2009/rpt/2009-R-0111.htm>.

3 Keith M. Phaneuf, “CT Now Sitting on \$4.1 Billion Budget Reserve,” *CT Mirror*, July 23, 2024, <http://ctmirror.org/2024/07/23/ct-budget-reserve-guardrails-pension/>.

In addition, the guardrails have allowed Connecticut to make substantial supplemental payments of approximately \$8.6 billion on unfunded pension liabilities, which the Office of Policy & Management estimates will save approximately \$730.6 million per year in pension contributions.<sup>4</sup> This is important given Connecticut's \$35.1 billion of unfunded pension liabilities, one of the highest rates of debt in the country.<sup>5</sup>

At the same time, the guardrails have imposed increasingly stringent limits on the state's ability to use existing revenues to meet current needs or make future-oriented investments. The guardrails have placed billions of dollars of revenue "out of reach" for the General Assembly as legislators confront demands for additional investment in a number of areas including, among others, childcare and early childhood education, K-12 education, higher education, non-profit and nursing home support, infrastructure, and Medicaid costs, along with likely future increases in state employee salaries following the 2025 wage reopener in state employee contracts.

With increasing concerns about unmet needs, and annual surpluses above the volatility cap cumulatively approaching \$10 billion over the last seven years, there is a growing chorus of voices calling for reform to Connecticut's fiscal guardrails.<sup>6</sup> That debate will likely grow louder in the coming months as Connecticut faces its first budget in recent years without the benefit of American Rescue Plan Act (ARPA) funds to supplement state revenues.

This series of briefing papers aims to contribute to an informed and data-driven examination of Connecticut's fiscal guardrails. "An Overview of the Caps" provides an introduction to the guardrails as they are currently designed.

"Stakes of the Debate" takes a deeper look at both

- (a) the looming challenge Connecticut faces as the exhaustion of ARPA funds, increasing costs, and the fiscal guardrails together leave the state with a substantial current services budget gap despite projecting sizeable surpluses that are "off limits" for appropriation and
- (b) Connecticut's long-term liabilities, which remain daunting.

"The Volatility Cap: A Closer Look" and "The Spending Cap: A Closer Look" examine in greater detail the design of the volatility cap and spending cap, respectively, and offer alternatives to the current design.

Finally, "Impact of the Caps" reviews the effect that the guardrails have had, both in strengthening Connecticut's long-term fiscal position and in constraining budgetary flexibility and shaping spending trends.

<sup>4</sup> "Fiscal Accountability Report Fiscal Years 2025–2028," Jeffrey R. Beckham, Office of Policy and Management, 2024, <https://portal.ct.gov/-/media/opm/budget/fiscalaccountability/opm-2024-fiscal-accountability-report-final.pdf?rev=62b1ce2e4449447aae844475a9a500c7&hash=C76D46300CDD088FFD55F6A05E6CA60C>, 52; "Treasurer Russell Deposits \$608.2 Million Volatility Transfer into State Pension Funds," The Office of Treasurer Erick Russell, State of Connecticut's Treasurer's Office, 2024, [https://portal.ct.gov/ott/newsroom/news/news-releases/volatilitytransfer\\_fy24](https://portal.ct.gov/ott/newsroom/news/news-releases/volatilitytransfer_fy24).

<sup>5</sup> "Fiscal Accountability Report Fiscal Years 2025–2028," 31.

<sup>6</sup> "Fiscal Accountability Report Fiscal Years 2025–2028," 50.

These papers do not advocate for a particular course of action, nor do they provide an in-depth analysis of the contractual, constitutional, or political constraints to adjusting the guardrails, which are formidable. State statute provides a mechanism for making adjustments in extraordinary circumstances, year by year. In addition, the threshold of the volatility cap can be adjusted by a vote of three-fifths of the General Assembly. However, as a result of the bond lock, structural changes to the guardrails likely must wait until after 2028. Moreover, certain changes to the spending cap would require an amendment to the state constitution.

Notwithstanding those constraints, these papers seek to offer a framework for considering future adjustments that continue to protect fiscal discipline while recognizing that there was no magic, and arguably little science, behind the guardrails' initial design.

Modifications to the existing spending cap, revenue cap, and volatility cap can be understood as falling into one of three categories: changes to calculation of the base, changes to the calculation of the growth rate or adjustment, or changes to the consequences of reaching the cap. The first two of those possible adjustments each receive more substantial treatment in this series in the context of the volatility and spending caps:

1. Modifying the volatility cap by (a) narrowing and broadening the tax revenues that make up the base of the cap, (b) applying alternative deflators to the existing base, and (c) employing a dynamic model (a rolling average) to set the threshold rather than pegging the cap to an arbitrary initial year threshold
2. Modifying the spending cap by (a) allowing for increases pegged to prior year spending cap thresholds rather than actual prior year spending, thus eliminating the downward shift that resulted from insufficient revenues in FY16–FY18 (which would require constitutional amendment); or (b) making a one-time adjustment to the spending cap base to account for that same downward shift

Throughout these papers, we accept the fundamental premise that the guardrails have played an important role in stabilizing Connecticut's fiscal position, growing the Budget Reserve Fund, and strengthening the state's grievously underfunded pension funds. We also embrace the proposition that examining the design of Connecticut's fiscal guardrails is a worthwhile endeavor.

# Connecticut's Fiscal Guardrails: A Data-Driven Analysis An Overview of the Caps

ZACHARY LISCOW *Yale Law School*

LUKE BRONIN *Yale Law School / The Connecticut Project*

NATHANAEL MCLAUGHLIN *Tobin Center for Economic Policy at Yale University*

PATRICK J. MURPHY *University of San Francisco*

MOHIT AGRAWAL *Yale Department of Economics*

ELIZA MCKENNEY *Tobin Center for Economic Policy at Yale University*

DECEMBER 2024

A joint research effort between [The Tobin Center for Economic Policy](#)  
and [The Connecticut Project](#)

Copyright © Yale University. All rights reserved.

## CONTRIBUTORS

ZACHARY LISCOW *Yale Law School*

Zachary Liscow is professor of law at Yale Law School, served as chief economist at the Office of Management and Budget at the White House from 2022–2023, and was a staff economist at the White House Council of Economic Advisers from 2009–2010. Liscow earned his PhD in economics from the University of California, Berkeley, and his JD from Yale Law School, as well as a degree in economics and in environmental science and public policy from Harvard College.

LUKE BRONIN *Visiting Lecturer in Law, Yale Law School / The Connecticut Project*

Luke Bronin is a visiting lecturer in law, senior research scholar in law, and Tsai leadership senior distinguished fellow in residence at Yale Law School and most recently served two terms as Mayor of Hartford, Connecticut. Bronin was general counsel to then-governor of Connecticut Dannel P. Malloy from 2013–2015 and prior to that served in the Obama administration at the US Department of the Treasury. Bronin was an officer in the US Navy Reserve. Bronin received a BA from Yale College, an MSc from the University of Oxford, and a JD from Yale Law School.

NATHANAEL MCLAUGHLIN *Policy Fellow, Tobin Center for Economic Policy at Yale*

Nat McLaughlin is a policy fellow at the Tobin Center for Economic Policy, previously held the role of policy advisor to Connecticut's Chief Budget Officer, and also served as a naval officer. McLaughlin holds an MA in global affairs and an MBA from Yale University, a Master's in national defense and security studies from the US Naval War College, and a BS in industrial engineering from Northwestern University.

PATRICK J. MURPHY *Professor, University of San Francisco*

Patrick J. Murphy is a professor and faculty director for the Urban and Public Affairs program at the University of San Francisco. He currently serves as the director of resource equity and public finance for The Opportunity Institute. Previously, Murphy worked at the US Office of Management and Budget, as a consultant for state and local government, and at Arnold Ventures. Murphy received a BA from the University of Notre Dame, an MPA from the University of Texas-Austin, and a PhD and MA from the University of Wisconsin-Madison.

MOHIT AGRAWAL *PhD Candidate, Yale Department of Economics*

Mohit Agrawal is an applied microeconomist and a fourth-year PhD candidate in economics, a graduate policy fellow at Yale's Institute for Social and Policy Studies, and a visiting scholar at University of Chicago's Becker Friedman Institute. Agrawal served as deputy policy director and advisor to Governor Ned Lamont of Connecticut from 2019–2021. He received his BA in mathematics from Princeton University, and an MSc in applied statistics, as well as an MBA, from the University of Oxford.

ELIZA MCKENNEY *Research & Policy Program Manager, Tobin Center for Economic Policy at Yale*

Eliza McKenney is a research and policy program manager at the Tobin Center for Economic Policy. Prior to joining the Tobin Center, McKenney worked in economic consulting at Cornerstone Research where she collaborated with leading economic and financial academics. McKenney holds a BBA in finance and a BA in psychology from the College of William & Mary.

Connecticut has had statutory constraints on borrowing or spending for decades, with a debt limit first adopted in 1957 and a spending cap adopted in 1991, alongside the passage of the first state income tax.<sup>1</sup> However, the 2017 revisions to the spending and borrowing caps, combined with the new revenue and volatility caps, represent a far more comprehensive set of restrictions on the General Assembly and the governor's budgetary and borrowing authority. This paper summarizes those "fiscal guardrails." The spending cap and volatility cap are discussed in greater detail in separate papers in this series.

**DEBT LIMITS AND BOND CAPS** Limits on state borrowing have the longest history in the state, with the first debt limit established in 1957.<sup>2</sup> There have been a number of adjustments and additions to the structure of these caps over the years, but the basic goal has remained the same: to ensure that the state borrows within its means and provides confidence to purchasers of state bonds that they will be repaid. The current statutory restrictions on borrowing include the following four caps:

- **Debt Limit.** The debt limit restricts the aggregate amount of indebtedness, including both outstanding debt and debt authorized by the General Assembly but not yet issued, to 1.6 times the expected revenue receipts during a given fiscal year.<sup>3</sup>
- **Bond Issuance Cap.** The issuance cap restricts the amount of general obligation bonds and credit revenue bonds that the Treasurer may issue in a given fiscal year to \$2.4 billion, with adjustments for inflation beginning in FY25. It does, however, provide a number of exemptions from the total calculation. These include bonds issued by the Connecticut State University system, UConn 2000 construction bonds, refunding bonds, revenue anticipation notes or other instruments designed to meet cash flow needs, and borrowing in response to an emergency such as a natural disaster.<sup>4</sup>
- **Bond Allotment Cap.** The allotment cap restricts the amount of general obligation and credit revenue bonds that the governor may requisition in a given fiscal year to \$2.4 billion, with the same adjustment and exemptions as the issuance cap.<sup>5</sup>
- **Bond Allocation Cap.** The bond allocation cap limits the amount of general obligation bonds and credit revenue bonds that the Bond Commission can approve in a given year to \$2.4 billion, adjusted for inflation beginning in FY25.<sup>6</sup>

<sup>1</sup> "Connecticut's Fiscal Guardrails Treasurer's Office Inaugural Investor Conference," Connecticut State Treasurer's Office, 2023, <https://portal.ct.gov/-/media/opm/bud-other-projects/reports/other-reports/inaugural-ct-investor-conference--opm--fiscal-guardrails--may-23-2023.pdf>, 4.

<sup>2</sup> "Connecticut's Fiscal Guardrails Treasurer's Office Inaugural Investor Conference," 4.

<sup>3</sup> "Sec. 3-21. Bond Limitation. Debt Certification. Bond Issuance Limitation. Allotment Limitation," Chapter 32, Treasurer, General Statutes of Connecticut, [https://cga.ct.gov/current/pub/chap\\_032.htm#sec\\_3-21](https://cga.ct.gov/current/pub/chap_032.htm#sec_3-21).

<sup>4</sup> "Sec. 3-21."

<sup>5</sup> "Sec. 3-21."

<sup>6</sup> "Sec. 3-20. State General Obligation Bond Procedure Act. State Bond Commission. Bond pledge and undertaking," Chapter 32, Treasurer, General Statutes of Connecticut, [https://www.cga.ct.gov/2024/sup/chap\\_032.htm#sec\\_3-20](https://www.cga.ct.gov/2024/sup/chap_032.htm#sec_3-20).



**SPENDING CAP** Connecticut's spending cap has both constitutional and statutory elements. A statutory spending cap was first enacted alongside the income tax in 1991. A constitutional amendment was ratified the following year, prohibiting the General Assembly from increasing general budget expenditures above the prior year's expenditures by more than the increase in personal income or the percentage increase in inflation, whichever is greater.<sup>7</sup> Practically, this means that the General Assembly appropriation of funds is limited by prior year appropriations.

The constitution leaves it to the General Assembly to define the terms "increase in personal income," "increase in inflation," and "general budget expenditures." The definition of those terms may be amended by a three-fifths majority of the members of each house of the legislature.<sup>8</sup>

Determining the base ("general budget expenditures") upon which a given year's spending cap is calculated is complicated in practice (see Figure II.A). Since its initial adoption, the base has been adjusted multiple times. Certain categories of spending have been consistently excluded, while other types of spending have been included or excluded from the cap over time.

As required by the state constitution, the cap calculation excludes debt service payments. Other categories of expenditure have been excluded or included under the cap at different times. Aid to distressed municipalities was long excluded from the spending cap but has been moved under the cap over time, with the bulk of municipal aid moving on budget in FY24. Similarly, appropriations to fund the actuarially determined contribution to the pension funds were initially excluded but are now under the cap.

The spending cap base in FY25 includes approximately 74 percent of all general budget appropriations in FY25 or \$19.3 billion of a \$26.0 billion appropriated budget. Excluded from the spending cap today are debt service of \$3.5 billion in FY25, unfunded Teacher Retirement System liabilities of \$1.3 billion, and the appropriation of federal funds of \$1.9 billion.<sup>9</sup>

To calculate the allowable growth in spending from one year to the next, the base is adjusted by the compound annual increase in personal income over the prior five years, using Bureau of Economic Analysis statistics or the annual increase in the consumer price index (CPI) measured in December from the Bureau of Labor Statistics, whichever is greater.<sup>10</sup> According to the Connecticut State Treasurer's Office, the growth in personal income test has been applied twenty-seven times while the CPI was applied as the deflator only five times over the period of 1993 to 2024.<sup>11</sup>

7 "Article III, Section 18(b)," Constitution of the State of Connecticut, 2023, [https://www.cga.ct.gov/asp/Content/constitutions/Constitution\\_State\\_CT.pdf](https://www.cga.ct.gov/asp/Content/constitutions/Constitution_State_CT.pdf), 210.

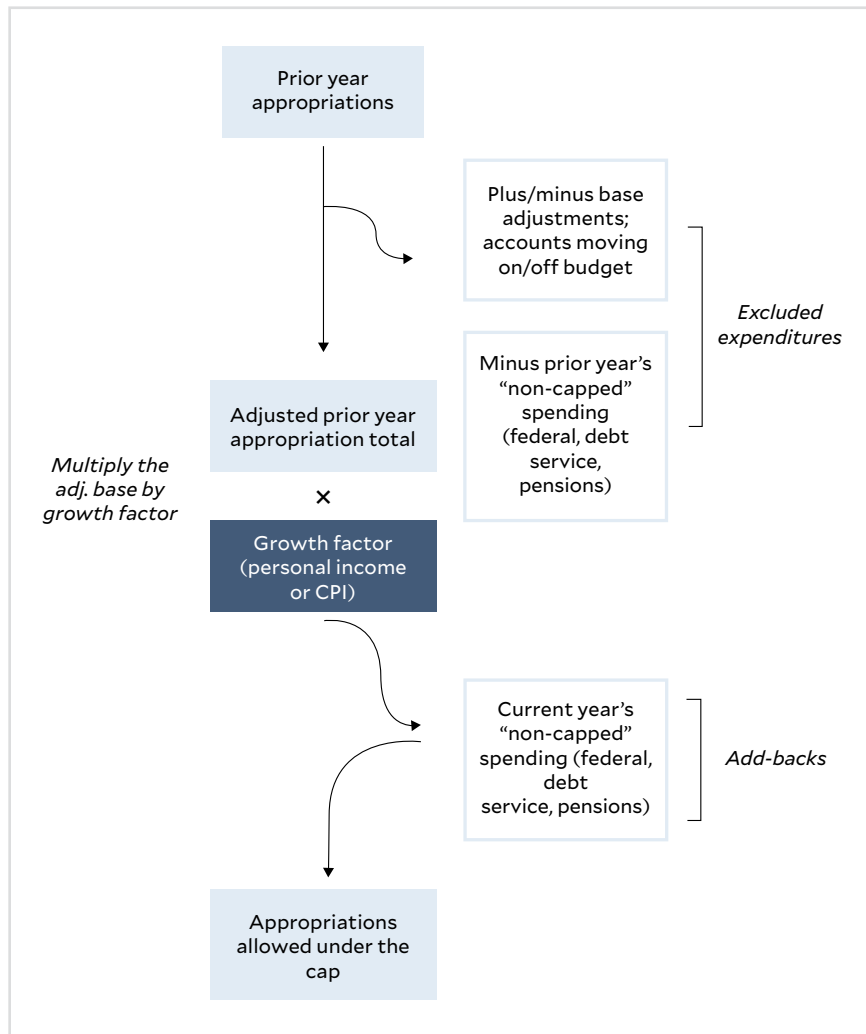
8 "Article III, Section 18(b)," 210.

9 "Connecticut State Budget FY 24–FY 25," Office of Fiscal Analysis, [https://www.cga.ct.gov/ofa/Documents/year/BB/2023BB-20231005\\_FY%2024%20and%20FY%2025%20Connecticut%20Budget.pdf](https://www.cga.ct.gov/ofa/Documents/year/BB/2023BB-20231005_FY%2024%20and%20FY%2025%20Connecticut%20Budget.pdf), 393.

10 "Sec. 2-33a. Limitation on expenditures authorized by General Assembly. Base year adjustment for certain expenditures," Chapter 16, General Assembly, General Statutes of Connecticut, [https://www.cga.ct.gov/current/pub/chap\\_016.htm#sec\\_2-33a](https://www.cga.ct.gov/current/pub/chap_016.htm#sec_2-33a).

11 "Connecticut's Fiscal Guardrails Treasurer's Office Inaugural Investor Conference," 5.

Figure II.A: Connecticut's spending cap calculation



After adjusting for growth, the items that had previously been excluded from the calculation are added back, producing the limit for appropriations for the current year.

**VOLATILITY CAP** The newest and most innovative of the fiscal constraints included in the 2017 budget deal was the volatility cap. The volatility cap was designed to insulate the budget from the significant swings in revenue that had become a feature of Connecticut's budget landscape in the years following the Great Recession. It is based on the principle that unpredictable revenue sources should not be relied upon to fund predictable, recurring expenditures.<sup>12</sup>

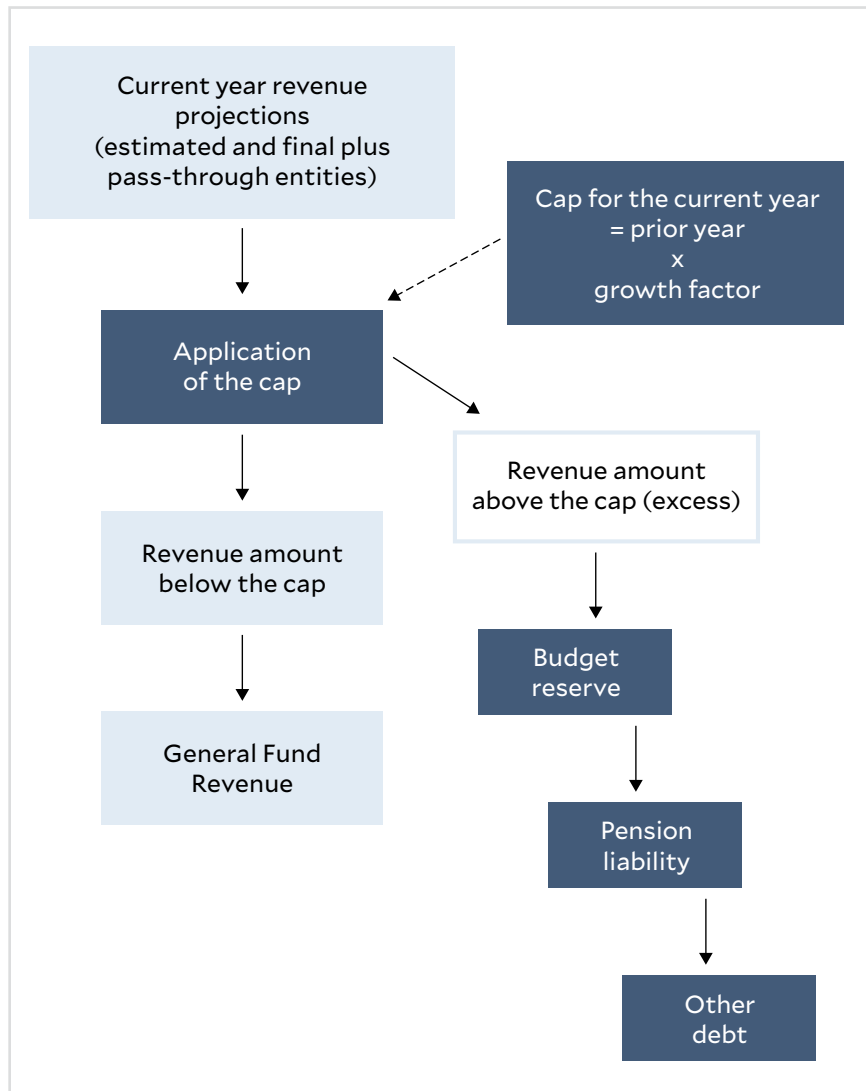
The volatility cap limits the amount that the General Assembly can budget from Connecticut's most significant, volatile revenue sources: taxes on pass-through entities and the estimated and final payments of the personal income tax.<sup>13</sup> As with the spending cap, the volatility cap statute

<sup>12</sup> "Connecticut's Fiscal Guardrails Treasurer's Office Inaugural Investor Conference," 19.

<sup>13</sup> "Connecticut's Fiscal Guardrails Treasurer's Office Inaugural Investor Conference," 7. Smaller revenue sources such as the inheritance tax are more volatile but tend to make up less than a percent of state revenues. See, "Connecticut State Budget FY 24–FY 25," 401.

establishes a base amount that is then adjusted annually. When tax receipts are estimated for the coming year, they are compared to the cap. Any revenues above the threshold are deemed excess and are unavailable for appropriation by the General Assembly and instead are transferred to the Budget Reserve Fund (BRF).<sup>14</sup>

Figure II.B: Connecticut's volatility cap calculation



Conceptually, the volatility cap is designed to ensure that in “good years” – years when tax collections are unusually high – the windfall is used to bolster savings and pay down long-term liabilities, rather than growing the state budget and leaving the state vulnerable to revenue shortfalls in less favorable years.<sup>15</sup>

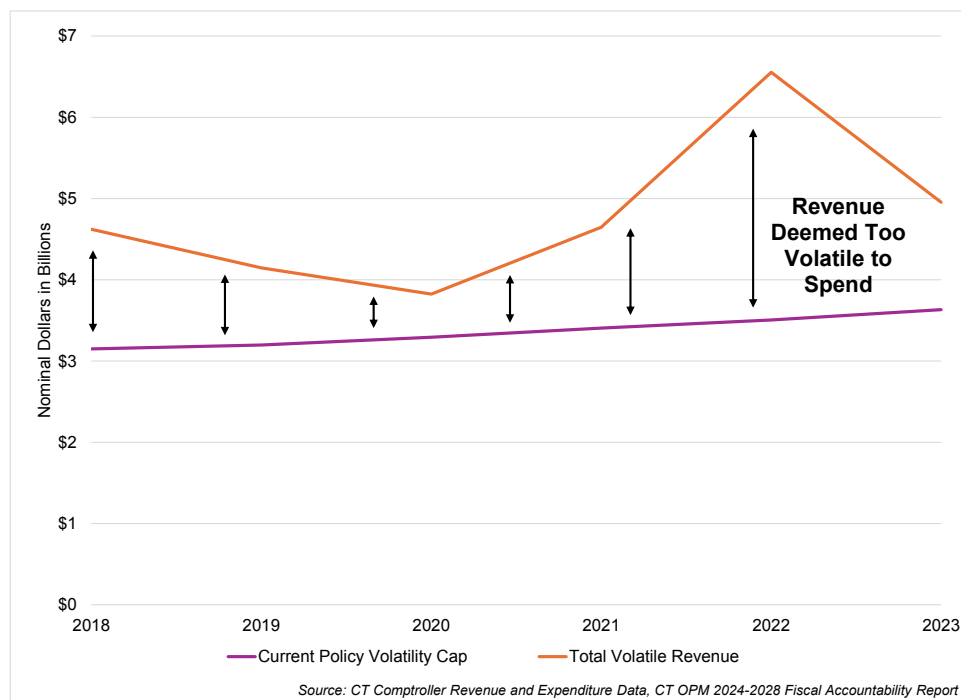
<sup>14</sup> “Sec. 4-30a. Transfer of surplus to Budget Reserve Fund, State Employees Retirement Fund and Teachers’ Retirement Fund. Reduction of outstanding state indebtedness. Transfer of funds from Budget Reserve Fund,” Chapter 47, State Property and Funds, General Statutes of Connecticut, [https://www.cga.ct.gov/current/pub/chap\\_047.htm#sec\\_4-30a](https://www.cga.ct.gov/current/pub/chap_047.htm#sec_4-30a).

<sup>15</sup> “Connecticut’s Fiscal Guardrails Treasurer’s Office Inaugural Investor Conference,” 19.

In Connecticut, the volatility cap was set at \$3.15 billion in 2018 and allowed to increase each year based upon the state's compound annual rate in personal income growth over the prior five calendar years using data reported by the federal Bureau of Economic Analysis.<sup>16</sup> Funds in excess of this amount are deposited into the BRF. Once the BRF reaches a set level (recently increased from 15 percent to 18 percent of the state's operating budget), any additional funds are to be used to pay down pension liabilities and debt (see Figure II.B).<sup>17</sup>

It is worth noting that since the establishment of the volatility cap, revenues from the two most volatile sources of revenue noted above have exceeded the threshold in every year since 2018. In other words, rather than merely ensuring that unusual or inconsistent windfalls are set aside, the cap has served to create a significant recurring surplus. From 2018 to 2023, the amount of revenue that exceeded the volatility cap in a given year ranged from \$530 million to over \$3 billion, with an average of \$1.4 billion per year (Figure II.C).

Figure II.C: Connecticut's volatility cap in practice, 2018–2023



Under the statute establishing the volatility cap, the cap threshold can be adjusted by a vote of three-fifths of both chambers of the General Assembly “due to changes in state or federal tax law or policy or significant adjustments to economic growth or tax collections.”<sup>18</sup>

<sup>16</sup> “Sec. 4-30a.”

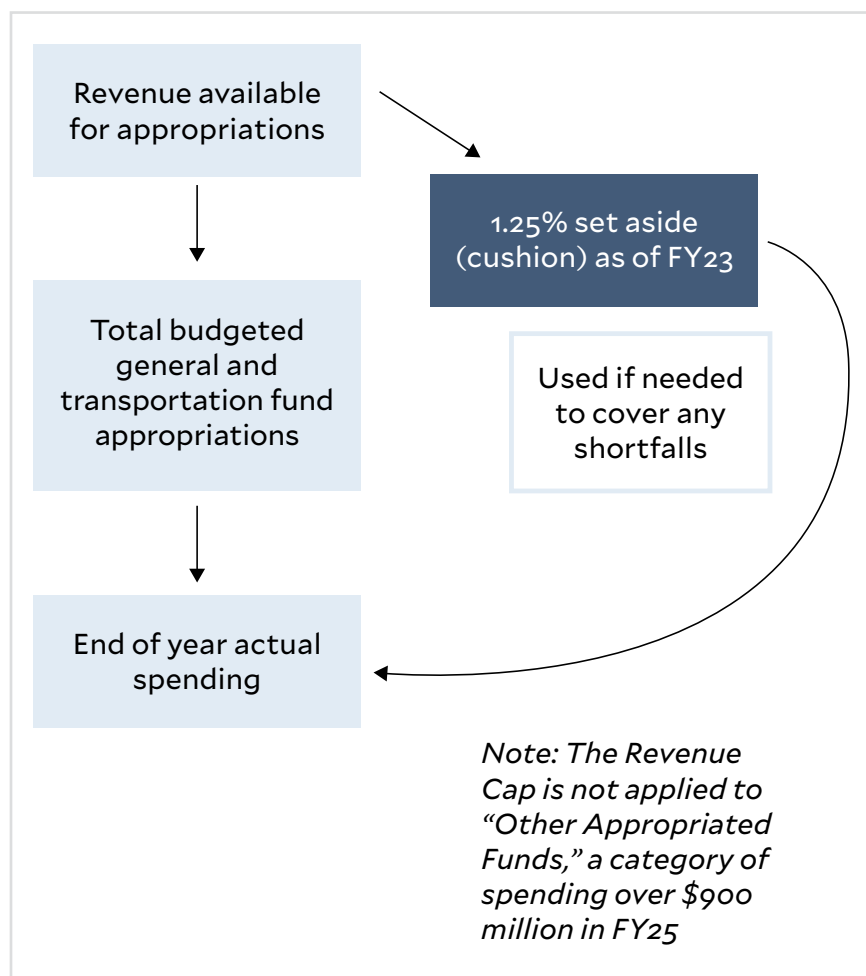
<sup>17</sup> The Budget Reserve Fund is funded up to a statutorily defined percentage of net General Fund appropriations for the current fiscal year. Once the BRF is funded at that defined percentage, excess funds are paid toward reducing unfunded pension liabilities. That statutory percentage was initially set at 15% and was updated to 18% for FY25 (starting July 1, 2024). See, “Sec 4-30a” and “Connecticut’s Fiscal Guardrails Treasurer’s Office Inaugural Investor Conference,” 8.

<sup>18</sup> “Sec. 4-30a.”

**REVENUE CAP** The revenue cap, also established in 2017, was designed to force appropriators to budget conservatively. It does this by limiting the amount of General Fund and Special Transportation Fund appropriations to less than the total amount of projected revenue.<sup>19</sup> The concept behind the cap is that both revenue and spending projections are just that: projections. If spending exceeds expectations or revenues fall short, or both, the budget for that year is in deficit.

The revenue cap creates a cushion to mitigate that risk. By setting aside a relatively small share of total projected revenue (1-2 percent), the state should have the ability to cover its spending for the coming year. The revenue cap creates this financial cushion and is applied to those revenues available for appropriations (after application of the volatility cap).<sup>20</sup>

Figure II.D: Connecticut's revenue cap calculation



19 "Sec. 2-33c. Limitation on General Fund and Special Transportation Fund appropriations," Chapter 16, General Assembly, General Statutes of Connecticut, [https://cga.ct.gov/2023/pub/chap\\_016.htm#sec\\_2-33c](https://cga.ct.gov/2023/pub/chap_016.htm#sec_2-33c).

20 "Connecticut's Fiscal Guardrails Treasurer's Office Inaugural Investor Conference," 6.

The revenue cap has been phased in gradually, stepping down from 99.75 percent in FY19 to 98.75 percent in FY23.<sup>21</sup> While the initial revenue cap statute would have dropped the threshold to 98 percent in FY26, in 2023 the General Assembly froze the revenue cap at its current level of 98.75 percent. In other words, of the total revenue available for appropriations, 1.25 percent gets set aside until the books are closed at the end of the fiscal year. If funds are needed to close an operating deficit at year's end, they can be drawn from this 1.25 percent reserve. If any funds remain in this reserve, they are deposited into the BRF. As with the spending cap, the revenue cap could be lifted in a given year should the governor declare a state of emergency and three-fifths of each house concur.

Notably, the revenue cap is not applied to a category of revenues termed "Other Appropriated Funds," which includes funds for very specific uses such as municipal aid, workers' compensation, and regulating banking. This category has grown from an estimated \$230.4 million in FY23 to an estimated \$902.2 million in FY25 largely due to efforts to bring municipal aid on budget and the creation of new accounts associated with regulating the recreational cannabis market.<sup>22</sup>

### **How do the caps work and work relative to one another?**

While each of the different guardrails is a separate provision in statute or the state's constitution, they have an interactive relationship when it comes to making budget decisions. Understanding how the different guardrails work in Connecticut requires something of a complicated "flow chart" (see Figure II.E).

As illustrated in the diagram, economic activity in the state drives the system. Applying the state's tax structure to that economic activity produces revenue for the state: a sales tax is applied to retail sales, personal income tax rates determine how much an individual will pay, and so on. If the level of economic activity increases, state revenue will generally increase as well. Similarly, if the economy enters a downturn, tax receipts will fall relative to the prior year.

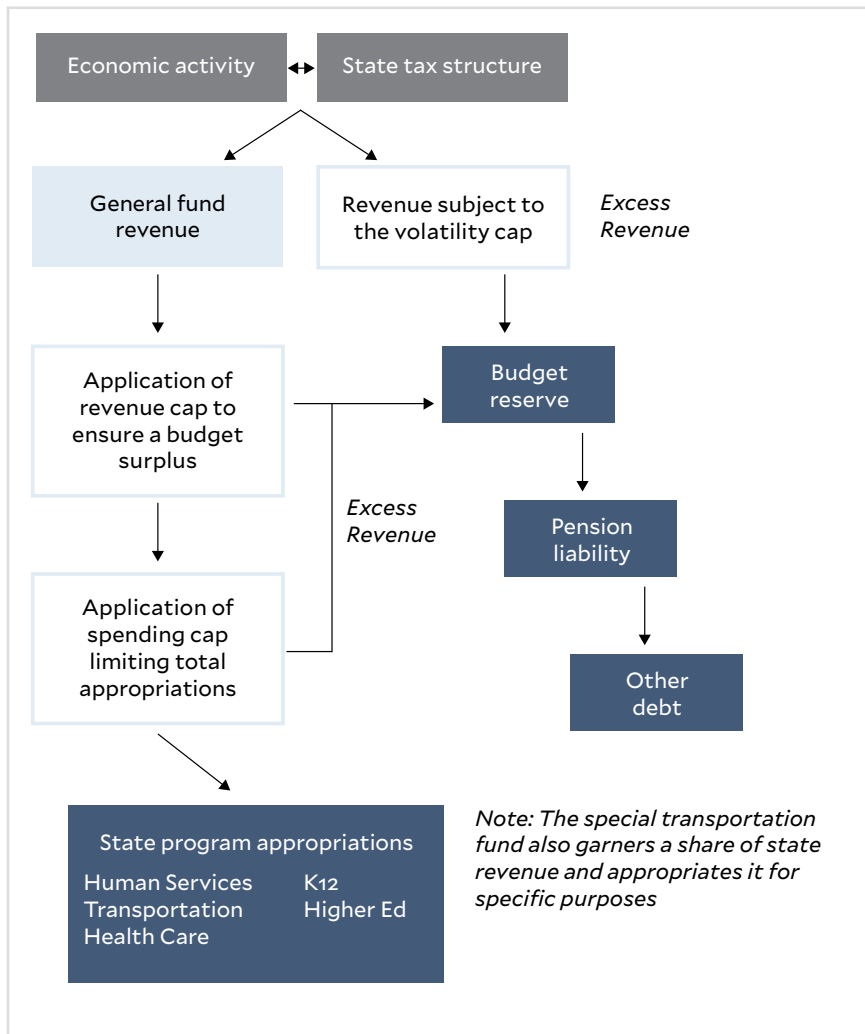
The caps come into play early in the process. The first critical point is the calculation of the volatility cap threshold, which is annually adjusted from the statutory amount set in FY18 using the five-year compound growth in personal income. Revenues subject to the volatility cap are set aside and subject to that volatility cap threshold; in current policy, those revenues include receipts from the pass-through entity (PTE) tax and estimated and final payments (EFP) for the personal income tax. Any amount collected above the volatility cap is siphoned off to be placed in the BRF. The remainder below the volatility cap is added back with the other revenues in the General Fund.<sup>23</sup>

21 "Connecticut's Fiscal Guardrails Treasurer's Office Inaugural Investor Conference," 6.

22 "Connecticut State Budget FY 24–FY 25," 395–396.

23 "Connecticut's Fiscal Guardrails Treasurer's Office Inaugural Investor Conference," 9; "OLR Backgrounder: Connecticut's Volatility Cap and Budget Reserve Fund," Rute Pinho, Office of Legislative Research, 2024, <https://www.cga.ct.gov/2024/rpt/pdf/2024-R-0019.pdf>.

Figure II.E: Connecticut’s fiscal guardrails calculation



This new pool of revenues is then subject to another calculation, the revenue cap. As of FY23, the General Assembly may only appropriate 98.75 percent of projected available revenue. In FY23, a year with about \$22.4 billion in post-volatility cap revenue collected, the revenue cap created a de facto surplus of nearly \$300 million.<sup>24</sup> Connecticut has thus taken something of a “belt and suspenders,” abundance-of-caution approach: first, the volatility cap makes deposits into the BRF in years with strong economic performance; then, the revenue cap sets aside additional savings into the BRF for the given year.

<sup>24</sup> “Connecticut State Budget FY 23 Revisions,” Office of Fiscal Analysis, [https://www.cga.ct.gov/ofa/Documents/year/BB/2022BB-20220809\\_FY%2023%20Connecticut%20Budget%20Revisions.pdf](https://www.cga.ct.gov/ofa/Documents/year/BB/2022BB-20220809_FY%2023%20Connecticut%20Budget%20Revisions.pdf), 9.

The third critical point comes with the application of the spending cap. Spending in a given year cannot exceed the prior year's amount spent, plus an adjustment for growth. In other words, even after revenue deemed too volatile to spend is set aside, and even after the remainder is reduced by 1.25 percent as required by the revenue cap, the remaining revenue may still exceed the spending cap.<sup>25</sup>

### **The “Bond Lock”**

As noted in the introduction to the series, the statutes passed in 2017 also included a so-called bond lock provision, requiring the treasurer to include covenants in new bond issuances pledging to maintain the fiscal guardrails for a certain period of time. This pledge is currently binding through FY33, unless the General Assembly adopts a resolution not to continue the pledge beyond FY28.

The bond lock provision permits adjustment to the guardrails if the governor declares an emergency or the existence of extraordinary circumstances and an adjustment is approved by at least three-fifths of both chambers of the General Assembly. However, such an adjustment would apply only to the fiscal year in which it was made.<sup>26</sup>

<sup>25</sup> “Sec. 2-33a.”

<sup>26</sup> “State Fiscal Controls,” Rute Pinho, Office of Legislative Research, 2023, <https://www.cga.ct.gov/2023/rpt/pdf/2023-R-0299.pdf>.



# Connecticut's Fiscal Guardrails: A Data-Driven Analysis Stakes of the Debate

ZACHARY LISCOW *Yale Law School*

LUKE BRONIN *Yale Law School / The Connecticut Project*

NATHANAEL MCLAUGHLIN *Tobin Center for Economic Policy at Yale University*

PATRICK J. MURPHY *University of San Francisco*

MOHIT AGRAWAL *Yale Department of Economics*

ELIZA MCKENNEY *Tobin Center for Economic Policy at Yale University*

DECEMBER 2024

A joint research effort between [The Tobin Center for Economic Policy](#)  
and [The Connecticut Project](#)

Copyright © Yale University. All rights reserved.

## CONTRIBUTORS

ZACHARY LISCOW *Yale Law School*

Zachary Liscow is professor of law at Yale Law School, served as chief economist at the Office of Management and Budget at the White House from 2022–2023, and was a staff economist at the White House Council of Economic Advisers from 2009–2010. Liscow earned his PhD in economics from the University of California, Berkeley, and his JD from Yale Law School, as well as a degree in economics and in environmental science and public policy from Harvard College.

LUKE BRONIN *Visiting Lecturer in Law, Yale Law School / The Connecticut Project*

Luke Bronin is a visiting lecturer in law, senior research scholar in law, and Tsai leadership senior distinguished fellow in residence at Yale Law School and most recently served two terms as Mayor of Hartford, Connecticut. Bronin was general counsel to then-governor of Connecticut Dannel P. Malloy from 2013–2015 and prior to that served in the Obama administration at the US Department of the Treasury. Bronin was an officer in the US Navy Reserve. Bronin received a BA from Yale College, an MSc from the University of Oxford, and a JD from Yale Law School.

NATHANAEL MCLAUGHLIN *Policy Fellow, Tobin Center for Economic Policy at Yale*

Nat McLaughlin is a policy fellow at the Tobin Center for Economic Policy, previously held the role of policy advisor to Connecticut's Chief Budget Officer, and also served as a naval officer. McLaughlin holds an MA in global affairs and an MBA from Yale University, a Master's in national defense and security studies from the US Naval War College, and a BS in industrial engineering from Northwestern University.

PATRICK J. MURPHY *Professor, University of San Francisco*

Patrick J. Murphy is a professor and faculty director for the Urban and Public Affairs program at the University of San Francisco. He currently serves as the director of resource equity and public finance for The Opportunity Institute. Previously, Murphy worked at the US Office of Management and Budget, as a consultant for state and local government, and at Arnold Ventures. Murphy received a BA from the University of Notre Dame, an MPA from the University of Texas-Austin, and a PhD and MA from the University of Wisconsin-Madison.

MOHIT AGRAWAL *PhD Candidate, Yale Department of Economics*

Mohit Agrawal is an applied microeconomist and a fourth-year PhD candidate in economics, a graduate policy fellow at Yale's Institute for Social and Policy Studies, and a visiting scholar at University of Chicago's Becker Friedman Institute. Agrawal served as deputy policy director and advisor to Governor Ned Lamont of Connecticut from 2019–2021. He received his BA in mathematics from Princeton University, and an MSc in applied statistics, as well as an MBA, from the University of Oxford.

ELIZA MCKENNEY *Research & Policy Program Manager, Tobin Center for Economic Policy at Yale*

Eliza McKenney is a research and policy program manager at the Tobin Center for Economic Policy. Prior to joining the Tobin Center, McKenney worked in economic consulting at Cornerstone Research where she collaborated with leading economic and financial academics. McKenney holds a BBA in finance and a BA in psychology from the College of William & Mary.

In the coming months, the future of Connecticut's fiscal guardrails will likely be a topic of discussion and debate as Connecticut faces its first budget in recent years without substantial amounts of federal assistance to supplement state revenues. As policymakers consider the future of the fiscal guardrails, they will have to contend with the looming challenge of a FY26 budget cliff, potentially requiring severe austerity despite another projected surplus. At the same time, policymakers will have to contend with the long-term challenge: the fact that Connecticut's unfunded long-term liabilities remain daunting.

This paper examines both of those challenges.

### THE LOOMING CHALLENGE: THE END OF COVID-19 FEDERAL ASSISTANCE

The impact of the fiscal guardrails has been masked, to some extent, by the influx of federal COVID response and recovery dollars to Connecticut. Together, the Coronavirus Aid, Relief, and Economic Security (CARES) Act of 2020 and the American Rescue Plan Act (ARPA) of 2021 provided Connecticut with approximately \$4.2 billion to supplement state funding of government services, public health, and municipality functions.<sup>1</sup>

While these funds have been allocated over multiple years, they represent a significant supplement to state revenue: in total, these funds represent nearly 20 percent of Connecticut's FY21 budget or essentially the equivalent of Connecticut's Budget Reserve Fund (BRF) estimated as of November 2024.<sup>2</sup>

Beyond these general-purpose funds used to support state operations, specific provisions of these trillion-dollar federal aid packages bolstered core local government services such as K-12 and early childhood education, provided substantial aid to municipalities, and enabled Connecticut to extend support to many of its most disadvantaged residents through new programs such as emergency rental assistance. Highlighting a few significant examples, Connecticut received:

- \$1.7 billion through ARPA and CARES with 90 percent going to local school districts, 50 percent of the state's FY21 contribution to K-12 education<sup>3</sup>

1 "American Rescue Plan Act (ARPA) Funding & Project Inventory Dashboard," CT Data, <https://data.ct.gov/stories/s/3bjc-brqy>; "CARES Payments to States and Eligible Units of Local Government," U.S. Department of the Treasury, 2021, <https://home.treasury.gov/system/files/136/Payments-to-States-and-Units-of-Local-Government.pdf>.

2 "Fiscal Accountability Report Fiscal Years 2025–2028," Jeffrey R. Beckham, Office of Policy and Management, <https://portal.ct.gov/-/media/opm/budget/fiscalaccountability/opm-2024-fiscal-accountability-report-final.pdf?rev=62b1ee2e4449447aae844475a9a500c7&hash=C76D46300CDD088FFD55F6A05E6CA60C%20%20,%2052,49>;

"Connecticut State Budget FY 22–FY 23," Office of Fiscal Analysis, [https://www.cga.ct.gov/ofa/Documents/year/BB/2021BB-20210927\\_FY%2022%20and%20FY%2023%20Connecticut%20Budget.pdf](https://www.cga.ct.gov/ofa/Documents/year/BB/2021BB-20210927_FY%2022%20and%20FY%2023%20Connecticut%20Budget.pdf).

3 "COVID-19 Relief Funding for Education," School + State Finance Project, accessed November 14, 2024, <https://schoolstatefinance.org/issues/esser-funding>.

- \$276 million in childcare stabilization and development funds to support early childhood education (ECE), more than 100 percent of the Office of Early Childhood's \$252 million FY21 budget<sup>4</sup>
- An additional \$1.56 billion directly to Connecticut municipalities (including counties, metropolitan cities, and non-entitlement units), about 2.5 times the municipal aid provided by the state in FY21 or 8 percent of FY21 general revenues at the local level<sup>5</sup>
- \$236 million in emergency rental assistance to prevent evictions in a state with a significant housing shortage<sup>6</sup>

While the state of Connecticut, local school districts, and municipalities used a portion of these COVID-related federal funds to offset increased public health expenses and to address one-time, non-recurring needs, it is equally clear that these funds have also been used (and continue to be used) to fill structural gaps in the state and local budgets.

In the current budget year, FY25, ARPA funds are supporting approximately \$510 million in spending on current services that would otherwise have to be cut or funded with state revenue.<sup>7</sup> Another \$184 million in FY25 is being funded with a carryforward of operating surplus from FY24 – additional one-time funding that would either need to be cut or funded with state revenue in FY26 (see Figure III.A).

The reliance on time-limited federal funds to supplement state revenue for operating costs is well illustrated by looking at Connecticut's higher education system, where substantial federal funds have been used to fund ongoing operating expenses for the Connecticut State Colleges and Universities system (CSCU), UConn, and UConn Health:

<sup>4</sup> "FACT SHEET: Biden-Harris Administration Announces American Rescue Plan Funding to Rescue the Child Care Industry so the Economy Can Recover," The White House, 2021, <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/15/fact-sheet-biden-harris-administration-announces-american-rescue-plan-funding-to-rescue-the-child-care-industry-so-the-economy-can-recover/>; "Connecticut State Budget FY 22–FY 23," 266.

<sup>5</sup> "Allocation for Metropolitan Cities," U.S. Department of the Treasury, <https://home.treasury.gov/system/files/136/fiscalrecoveryfunds-metrocitiesfunding1.pdf>; "Allocation for Non-Entitlement Units," U.S. Department of the Treasury, <https://home.treasury.gov/system/files/136/fiscalrecoveryfunds-nonentitlementfunding1-508A.pdf>; "Allocation for Counties," U.S. Department of the Treasury, [https://home.treasury.gov/system/files/136/fiscalrecoveryfunds-countyfunding\\_2021.05.10-1a-508A.pdf](https://home.treasury.gov/system/files/136/fiscalrecoveryfunds-countyfunding_2021.05.10-1a-508A.pdf); "State and Local Finance Data Exploring the Census of Governments," State and Local Finance Initiative, Urban-Brookings Tax Policy Center, <https://state-local-finance-data.taxpolicycenter.org/pages.cfm> (Note: Filters include: Level = Local; State = Connecticut; Series = (R03) General Revenue; Year = 2021; Units = Total; Nominal/Real = Nominal); "Fiscal Accountability Report Fiscal Years 2023–2026," Jeffrey R. Beckham, Office of Policy and Management, <https://portal.ct.gov/-/media/opm/budget/fiscalaccountability/opm-2022-fiscal-accountability-report.pdf?rev=8da8ec5489a34eb7a985331c5a57d6f5&hash=ACDA98549FE3D59FB1C8AC50359BEB81>.

<sup>6</sup> "Emergency Rental Assistance Program: Payments to States and Eligible Units of Local Government," U.S. Department of the Treasury, <https://home.treasury.gov/system/files/136/Emergency-Rental-Assistance-Payments-to-States-and-Eligible-Units-of-Local-Government.pdf>.

<sup>7</sup> Keith M. Phaneuf, "New CT Budget Leaves Huge Gap One Year down the Road," *CT Mirror*, June 6, 2024, <https://ctmirror.org/2024/06/06/ct-budget-arpa-temporary-money/>.

- Since FY22, Connecticut has used \$410 million in ARPA dollars to fund CSCU operating and higher education expenses, including \$128.8 million of a \$440 million operating budget in FY25<sup>8</sup>
- UConn has received \$169 million and UConn Health has received \$245 million since FY22, including \$117 million in temporary supports in the current fiscal year (FY25)<sup>9</sup>

The challenge facing Connecticut is magnified by the fact that, even as non-recurring sources of funds dry up, the cost of maintaining current services is rising. While the focus is often on the growth of relatively fixed expenses such as debt service, pensions, OPEB, Medicaid, and other entitlements (which OPM estimates will grow by \$503.1 million in FY26) this likely under-represents year-to-year general fund growth.<sup>10</sup> If we assume that the cost of providing current services will grow at a rate of 2.6 percent, the current rate of inflation per the November 2024 CPI adjustment, the state's appropriations can be expected to grow by \$621.0 million in FY26.<sup>11</sup> The average rate of year-over-year General Fund appropriations growth in Connecticut over the last eight years (FY18–FY25) is higher, however, at 3.12 percent.<sup>12</sup> At that rate, the cost of providing current services would grow by \$744.4 million in FY26. It is possible that both of those assumptions understate the actual increase in the cost of current services as contractual increases in compensation may push the rate of personal services costs higher in coming years, perhaps as high as 4.5 percent, based on the rate at which personal services costs have grown in recent years. In Figure III.A below, we apply the eight-year average rate of 3.12 percent to provide an estimate of the fiscal cliff facing Connecticut.

8 “Connecticut State Budget FY 24–FY 25,” Office of Fiscal Analysis, [https://www.cga.ct.gov/ofa/Documents/year/BB/2023BB-20231005\\_FY%2024%20and%20FY%2025%20Connecticut%20Budget.pdf](https://www.cga.ct.gov/ofa/Documents/year/BB/2023BB-20231005_FY%2024%20and%20FY%2025%20Connecticut%20Budget.pdf), 306; “House Bill No. 5523, Public Act No. 24–81., An Act Concerning Allocations of Federal American Rescue Plan Act Funds and Provisions Related To General Government, Human Services, Education And The Biennium Ending June 30, 2025,” State of Connecticut, 2024, <https://cga.ct.gov/2024/ACT/PA/PDF/2024PA-00081-R00HB-05523-PA.PDF>, 2.

9 “House Bill No. 5523, Public Act No. 24–81,” 25.

10 “Fiscal Accountability Report Fiscal Years 2025–2028,” Jeffrey R. Beckham, Office of Policy and Management, <https://portal.ct.gov/-/media/opm/budget/fiscalaccountability/opm-2024-fiscal-accountability-report-final.pdf?rev=62b1ee2e4449447aae844475a9a500c7&hash=C76D46300CDD088FFD55F6A05E6CA60C>, 1.

11 “Consumer Price Index Summary,” U.S. Bureau of Labor Statistics, November 13, 2024, <https://www.bls.gov/news.release/cpi.nro.htm>.

12 “Connecticut State Budget FY 20 and FY 21,” Office of Fiscal Analysis, [https://www.cga.ct.gov/ofa/Documents/year/BB/2020BB-20191022\\_FY%2020%20and%20FY%2021%20Connecticut%20Budget.pdf](https://www.cga.ct.gov/ofa/Documents/year/BB/2020BB-20191022_FY%2020%20and%20FY%2021%20Connecticut%20Budget.pdf), 340; “Connecticut State Budget FY 22 and FY 23,” 363; “Connecticut State Budget FY 23 Revisions,” Office of Fiscal Analysis, [https://www.cga.ct.gov/ofa/Documents/year/BB/2022BB-20220809\\_FY%2023%20Connecticut%20Budget%20Revisions.pdf](https://www.cga.ct.gov/ofa/Documents/year/BB/2022BB-20220809_FY%2023%20Connecticut%20Budget%20Revisions.pdf), 304; “Connecticut State Budget FY 24–FY 25,” 393.

Figure III.A: Estimated Connecticut budget cliff, FY26 (dollars in millions)

	FY26 Budget Cliff		
	Assumed ARPA + Carryforward Expenses Continuing into FY26		
	100%	50%	0%
FY26 Estimated Total General Fund Revenues	\$25,157.9	\$25,157.9	\$25,157.9
Volatility Cap Adjustment	-\$1,278.2	-\$1,278.2	-\$1,278.2
Revenue Cap Adjustment	-\$298.5	-\$298.5	-\$298.5
FY26 General Fund Spendable Revenues	\$23,581.2	\$23,581.2	\$23,581.2
FY25 Estimated General Fund Expenditures	\$23,189.6	\$23,189.6	\$23,189.6
FY25 ARPA Investments	\$510.0	\$255.0	\$0.0
FY25 Carryforwards	\$184.0	\$92.0	\$0.0
FY26 Est. Growth in Cost of Current Services (3.12%)	\$744.4	\$733.6	\$722.8
FY26 Estimated Appropriations	\$24,628.0	\$24,270.2	\$23,912.4
<b>FY26 Budget Cliff</b>	<b>-\$1,046.8</b>	<b>-\$689.0</b>	<b>-\$331.2</b>

*Source: OPM Fiscal Accountability Reports, OPM Consensus Revenues, OPM Monthly Comptroller Letters*

Note: We apply 3.12% as the estimated growth in cost of current services for FY26 because it is the average change in Connecticut's General Fund appropriations over the last eight years.<sup>13</sup> Alternatively, we could use the most updated CPI change (November 2023 to November 2024), which is 2.6%<sup>14</sup>; or we could use the rate at which personal services costs are growing, per union contract negotiations, which is 4.5%.<sup>15</sup> In those cases, the FY26 budget cliff would be \$923.4 million or \$1.4 billion, respectively. We apply the cost of current services growth rate to FY25 Estimated General Fund Expenditures + FY25 ARPA Investments + FY25 Carryforwards because, as discussed, these expenditures are mostly on recurring programs (i.e., current services), rather than one-time costs. In the case that we apply the low-end growth rate, CPI change, (2.6%), to the assumption that 0% of FY25 ARPA and carryforwards are needed in FY26, the FY26 budget cliff is \$211.3 million.

As highlighted in Figure III.A, the state anticipates revenues of \$25.2 billion in FY26 with \$1.3 billion captured by the application of the volatility cap and another \$298.5 million held in reserve with the application of the revenue cap, leaving spendable revenues at an estimated \$23.6 billion in FY26. Meanwhile, on the spending side, the state is supplementing its General Fund budget in FY25 with one-time revenue sources, including \$510 million in federal ARPA dollars and \$184 million in operational surplus carried forward into the FY25 budget. Assuming that Connecticut's cost of current services will grow in line with the growth trend in the last eight years, the starting point for FY26 estimated expenditures is \$24.6 billion.

13 "Connecticut State Budget FY 17 Revisions," Office of Fiscal Analysis, [https://www.cga.ct.gov/ofa/Documents/year/BB/2017BB-20161101\\_FY%2017%20Connecticut%20Budget%20Revisions.pdf](https://www.cga.ct.gov/ofa/Documents/year/BB/2017BB-20161101_FY%2017%20Connecticut%20Budget%20Revisions.pdf), 16; "Connecticut State Budget FY 18 & FY 19 Budget," [https://www.cga.ct.gov/ofa/Documents/year/BB/2018BB-20180214\\_FY%2018%20and%20FY%2019%20Connecticut%20Budget.pdf](https://www.cga.ct.gov/ofa/Documents/year/BB/2018BB-20180214_FY%2018%20and%20FY%2019%20Connecticut%20Budget.pdf), 18; "Connecticut State Budget FY 19 Revisions," [https://www.cga.ct.gov/ofa/Documents/year/BB/2019BB-20180920\\_FY%2019%20Connecticut%20Budget%20Revisions.pdf](https://www.cga.ct.gov/ofa/Documents/year/BB/2019BB-20180920_FY%2019%20Connecticut%20Budget%20Revisions.pdf), 224; "Connecticut State Budget FY 20 and FY 21," 339; "Connecticut State Budget FY 22 and FY 23," 362; "Connecticut State Budget FY 23 Revisions," 303; "Connecticut State Budget FY 24-FY 25," 392.

14 "Consumer Price Index Summary."

15 "RESOLUTION PROPOSING APPROVAL OF AN AGREEMENT BETWEEN THE STATE OF CONNECTICUT AND THE STATE EMPLOYEES BARGAINING AGENT COALITION (SEBAC)," State of Connecticut General Assembly, Senate, 2024, <https://www.cga.ct.gov/2024/fc/pdf/2024SR-00012-R000466-FC.PDF>.

This estimate indicates that the state could face a difference in spendable revenues and anticipated expenses of up to \$1.05 billion in FY26 – in other words, a \$1.05 billion budget cliff, even as the state projects substantial surplus revenues.

The size of the cliff would be reduced, of course, if the expenditures supported by ARPA and carryforwards were to not be included in future budgets. However, examination of ARPA expenditures in FY25 reveals \$246 million in funding for UConn, UConn Health Center, and the Connecticut State Colleges and Universities, as well as over \$100 million in funding for early childhood education, children's behavioral health, homelessness, salary increases for employees of private providers of state services, and voting. In other words, a substantial portion of ARPA funds and funds carried forward from 2024 support ongoing programming and operating costs as opposed to one-time expenditures.<sup>16</sup> Figure III.A accordingly depicts two alternative scenarios: one in which 50 percent of the obligations currently funded by ARPA and carryforwards are included in the FY26 budget and one in which none of those obligations are funded in FY26. Even in the latter case, the state still faces a gap of approximately \$331.2 million.<sup>17</sup>

The spending cap further complicates this picture, limiting General Fund appropriations to an estimated \$24.1 billion<sup>18</sup>, roughly \$540 to \$860 million less than FY26 estimated General Fund expenditures assuming that Connecticut will need to cover 100 percent of FY25 ARPA investments and carryforwards in FY26. As a result, even if the state were to free up funds captured by the revenue and/or volatility cap to support the General Fund budget, the state could still be forced to reduce current spending levels by up to \$863.5 million due to the spending cap restriction.

Ultimately, without adjustments to the guardrails, Connecticut would need to close this gap of \$331 million to \$1.05 billion merely to maintain current services – even as calls grow louder for *new* investment in areas such as childcare, K-12 education, higher education, the non-profit sector that supports government services, and Medicaid, among others.

This convergence of factors – the growth of the cost of current services, the exhaustion of non-recurring revenue sources, and the limitations placed by the guardrails on the state's ability

16 "An Act Concerning Allocations of Federal American Rescue Plan Act Funds," 2, 24-25.

17 The figure is constructed using revenue and volatility cap estimates from November 2024 consensus revenues. Expenditures are calculated based on estimated General Fund spending in FY25 (from the October Comptroller's Letter), FY25 ARPA expenditures estimated at \$510 million, and FY25 carryforwards of \$184 million, plus estimated growth in current costs of 3.12%, to arrive at an estimated FY26 starting point for appropriations – essentially holding state expenditures constant. A 1.25% deduction from revenues is applied consistent with the state's revenue cap. See, "Consensus Revenues Estimate," Office of Policy and Management, Office of Fiscal Analysis, November 12, 2024, [https://portal.ct.gov/-/media/opm/bud-other-projects/reports/consensus\\_revenue/fy-2025/final\\_consensus\\_nov12\\_2024.pdf](https://portal.ct.gov/-/media/opm/bud-other-projects/reports/consensus_revenue/fy-2025/final_consensus_nov12_2024.pdf); "Comptroller's Letter," Office of Policy and Management, October 18, 2024, [https://portal.ct.gov/-/media/opm/budget/comptrollerletter/fy-2025/fy-25\\_october\\_2025\\_comptroller\\_letter.pdf](https://portal.ct.gov/-/media/opm/budget/comptrollerletter/fy-2025/fy-25_october_2025_comptroller_letter.pdf).

18 The spending cap is estimated using the methodology employed by the Office of Policy and Management (OPM) and the Office of Fiscal Analysis (OFA) as outlined in the OFA Budget Books. The calculation relies on the estimated spending cap growth rate of 5.12% as provided in the 2024 OPM Fiscal Accountability report, prior year appropriations provided in the OFA Budget Books and OPM Fiscal Accountability reports, and estimates of non-capped FY26 expenditures based on historical data. See, "Connecticut State Budget FY 22–FY 23," 363; "Fiscal Accountability Report Fiscal Years 2025–2028," 29.

to utilize more than a billion dollars of projected revenue – thus produces a budgeting paradox. Lawmakers will face a requirement to cut current services, even as the state continues to project more than enough revenue in coming years to avoid those cuts. The looming budget challenge dramatically raises the stakes of the debate over Connecticut's fiscal guardrails.

### THE LONG-TERM CHALLENGE: CONNECTICUT REMAINS HIGHLY INDEBTED

While Connecticut has made significant progress in strengthening its long-term fiscal position in recent years, it is important to note that the state's unfunded pension obligations, unfunded OPEB, and bonded debt levels continue to rank among the worst in the nation.

As of 2024, Connecticut's debt to GDP ratio was \$78.9 billion (Figure III.B) to \$363.4 billion, or 21.7 percent.<sup>19</sup> Slightly less than half of Connecticut's total indebtedness comes from the state's two major pension funds, the State Employees' Retirement System and the Teacher Retirement System, which together account for 44.4 percent or \$35.1 billion of the state's unfunded long-term liabilities (Figure III.B). Thus, while much conversation about Connecticut's long-term liabilities focuses on its pension obligations, bonded indebtedness and OPEB liabilities together contribute the majority of Connecticut's long-term liability.

Figure III.B: Connecticut long-term obligations (dollars in billions)

Bonded Indebtedness – As of 6/30/24	\$26.0
State Employee Pensions – Unfunded as of 6/30/24	\$19.2
Teachers' Pensions – Unfunded as of 6/30/24	\$15.9
State Employee Post-Retirement Health and Life – Net Liability as of 6/30/23	\$15.6
Teachers' Post-Retirement Health and Life – Net Liability as of 6/30/22	\$1.6
Cumulative GAAP Deficit – As of 6/30/23	\$0.6
<b>Total</b>	<b>\$78.9</b>

*Source: CT OPM 2024-2028 Fiscal Accountability Report*

Putting these numbers in the context of Connecticut's economy as a whole, the state's unfunded pension obligations represented 136 percent of its own-source revenue in 2021, while OPEB liability represents 103.2 percent of own-source revenue and bonded debt 72.1 percent.<sup>20</sup>

Putting Connecticut's debt picture in the national context, Connecticut places third behind only the states of New Jersey and Hawaii in 2022, with estimated debt to GDP ratios of 31.5 percent and 29.2 percent respectively. The next worst states after Connecticut in 2022 are Vermont (20.6 percent) and Illinois (20.5 percent).<sup>21</sup> For further context on Connecticut's position on certain types of debt, as of 2021, Connecticut ranked

19 "SQGDP1 State quarterly gross domestic product (GDP) summary," U.S. Bureau of Economic Analysis, last revised on September 27, 2024, <https://www.bea.gov/itable/regional-gdp-and-personal-income>.

20 David Draine, Joanna Biernacka-Lievstro, Ph.D., Keith Sliwa, and Riley Judd, "Long-Term Liabilities Weigh on State Finances," Pew, May 7, 2024, <https://www.pewtrusts.org/en/research-and-analysis/articles/2024/05/07/long-term-liabilities-weigh-on-state-finances>.

21 Chris Edwards, Marc Joffe, and Krit Chanwong, "Government Debt Varies Widely by State," *CATO At Liberty*, July 19, 2024, <https://www.cato.org/blog/government-debt-varies-widely-state>.



- Third in unfunded pension liability behind Illinois and New Jersey (Connecticut's position has since improved to fourth in 2023)<sup>22</sup>
- Fourth in unfunded retiree health care liability behind New Jersey, Illinois, and Delaware<sup>23</sup>
- Second in terms of debt levels behind Hawaii and ahead of Massachusetts<sup>24</sup>

As noted throughout this series of papers, Connecticut's fiscal guardrails have played an important role in improving Connecticut's long-term position. Since FY20, Connecticut's guardrails have contributed approximately \$8.6 billion towards unfunded pension obligations, above and beyond the annual actuarially required contributions. As of 2024, these payments are estimated to save Connecticut more than \$18.3 billion over the next twenty-five years, or \$730.6 million annually, and the savings will continue to grow with the estimated FY25 deposit of \$1.45 billion.<sup>25</sup>

While Connecticut's fiscal guardrails are an important part of the story, Connecticut's adoption of other responsible fiscal practices has been critical, as well. In 2012, Connecticut began fully funding its annual actuarially required contributions to the pension funds after nearly eight decades of insufficient funding. In 2008, Connecticut created a trust fund for OPEB, to allow the state to begin shifting away from pay-as-you-go (PAYGO) funding over time. As of FY24, this fund has \$2.7 billion in assets compared to \$18.3 billion in liabilities – 13 percent funded – a significantly improved position when compared to the PAYGO model used prior to 2007.<sup>26</sup>

Connecticut has also made changes in how its annual required contribution is calculated, the primary and most important of which was to reduce the assumed rate of return from 8 percent to 6.90 percent prior to 2019, bringing Connecticut in line with the national median.<sup>27</sup> This move resulted in not only a top-line increase to the amount of unfunded liabilities Connecticut carries on its balance sheet but also increases the amount that Connecticut is committed to funding each year and represents a more conservative and sustainable approach to measuring and funding Connecticut's unfunded liability.

Since 2018, Connecticut has made significant efforts to improve its position relative to its debt and unfunded obligations. Equally clear, when placed in a national context, is that Connecticut remains highly indebted. Unfunded long-term liabilities will continue to burden the state in the

22 "Unfunded Liabilities for State Pension Plans in 2023," Equable, 2023, <https://equable.org/unfunded-liabilities-for-state-pension-plans-in-2023/>.

23 Draine et al., "Long-Term Liabilities Weigh on State Finances."

24 Draine et al., "Long-Term Liabilities Weigh on State Finances."

25 "Fiscal Accountability Report FY 2025–FY 2028," 50, 52; "Treasurer Russell Deposits \$608.2 Million Volatility Transfer into State Pension Funds," The Office of Treasurer Erick Russell, State of Connecticut's Treasurer's Office, 2024, [https://portal.ct.gov/ott/newsroom/news/news-releases/volatilitytransfer\\_fy24](https://portal.ct.gov/ott/newsroom/news/news-releases/volatilitytransfer_fy24).

26 "State of Connecticut State Employee OPEB Plan," Governmental Accounting Standards Board, Segal, 2023, <https://osc.ct.gov/wp-content/uploads/2024/09/State-of-Connecticut-OPEB-GASB-75-for-June-30-2023-OSC.pdf>, 7.

27 "Connecticut State Teachers' Retirement System Actuarial Valuation as of June 30, 2018 (Revised as of June 18, 2019)," Cavanaugh Macdonald Consulting, LLC, [https://portal.ct.gov/-/media/trb/content/statisticsresearch/sr\\_actval18.pdf?rev=1c77b06c3806430489a447a30c3d8478&hash=8AA4C54D393282A17D4C03205A3DA9AD](https://portal.ct.gov/-/media/trb/content/statisticsresearch/sr_actval18.pdf?rev=1c77b06c3806430489a447a30c3d8478&hash=8AA4C54D393282A17D4C03205A3DA9AD), 6; "Current Assumed Rate of Return for State Pensions," Equable, 2022, <https://equable.org/current-assumed-rate-of-return-for-state-pensions/>.

coming decades, placing ongoing pressures on the state budget and forcing tough decisions on how to best manage Connecticut's finite resources.

### BALANCING THE CHALLENGE

Policymakers thus face an unenviable task. On one hand, Connecticut faces an imminent but somewhat artificial or self-imposed budget cliff as the constraints of the fiscal guardrails may compel deep cuts to current services even as the state generates sizeable annual surpluses. On the other, Connecticut continues to carry the burden of decades of imprudent fiscal practices, including a failure to adequately fund both pension and OPEB obligations.

A full analysis of Connecticut's long-term challenge would examine the actuarial assumptions that underly the estimate of long-term liabilities, the schedule at which Connecticut's existing bonded debt will be paid down, the projected annual actuarially determined contributions to the pension fund, and the projected annual OPEB costs in a hybrid pay-as-you-go and partially pre-funded model. These analyses are beyond the scope of this paper.

As daunting as Connecticut's long-term liabilities may be, however, it is important to recognize that there may be real costs from failing to meet current needs. And as illustrated in the "Impact of the Caps" paper, spending on key areas of government service from 2017 to 2021 has declined as Connecticut has dedicated more resources to debt service and long-term savings.

This paper seeks merely to frame the debate. "The Volatility Cap: A Closer Look" and "The Spending Cap: A Closer Look" offer some potential alternative designs to the existing guardrails, should policymakers seek to find a balance that allows for greater resources to be dedicated to meeting current needs.

# Connecticut's Fiscal Guardrails: A Data-Driven Analysis

## Connecticut's Volatility Cap: A Closer Look

ZACHARY LISCOW *Yale Law School*

LUKE BRONIN *Yale Law School / The Connecticut Project*

NATHANAEL MCLAUGHLIN *Tobin Center for Economic Policy at Yale University*

PATRICK J. MURPHY *University of San Francisco*

MOHIT AGRAWAL *Yale Department of Economics*

ELIZA MCKENNEY *Tobin Center for Economic Policy at Yale University*

DECEMBER 2024

A joint research effort between [The Tobin Center for Economic Policy](#)  
and [The Connecticut Project](#)

Copyright © Yale University. All rights reserved.

## CONTRIBUTORS

ZACHARY LISCOW *Yale Law School*

Zachary Liscow is professor of law at Yale Law School, served as chief economist at the Office of Management and Budget at the White House from 2022–2023, and was a staff economist at the White House Council of Economic Advisers from 2009–2010. Liscow earned his PhD in economics from the University of California, Berkeley, and his JD from Yale Law School, as well as a degree in economics and in environmental science and public policy from Harvard College.

LUKE BRONIN *Visiting Lecturer in Law, Yale Law School / The Connecticut Project*

Luke Bronin is a visiting lecturer in law, senior research scholar in law, and Tsai leadership senior distinguished fellow in residence at Yale Law School and most recently served two terms as Mayor of Hartford, Connecticut. Bronin was general counsel to then-governor of Connecticut Dannel P. Malloy from 2013–2015 and prior to that served in the Obama administration at the US Department of the Treasury. Bronin was an officer in the US Navy Reserve. Bronin received a BA from Yale College, an MSc from the University of Oxford, and a JD from Yale Law School.

NATHANAEL MCLAUGHLIN *Policy Fellow, Tobin Center for Economic Policy at Yale*

Nat McLaughlin is a policy fellow at the Tobin Center for Economic Policy, previously held the role of policy advisor to Connecticut's Chief Budget Officer, and also served as a naval officer. McLaughlin holds an MA in global affairs and an MBA from Yale University, a Master's in national defense and security studies from the US Naval War College, and a BS in industrial engineering from Northwestern University.

PATRICK J. MURPHY *Professor, University of San Francisco*

Patrick J. Murphy is a professor and faculty director for the Urban and Public Affairs program at the University of San Francisco. He currently serves as the director of resource equity and public finance for The Opportunity Institute. Previously, Murphy worked at the US Office of Management and Budget, as a consultant for state and local government, and at Arnold Ventures. Murphy received a BA from the University of Notre Dame, an MPA from the University of Texas-Austin, and a PhD and MA from the University of Wisconsin-Madison.

MOHIT AGRAWAL *PhD Candidate, Yale Department of Economics*

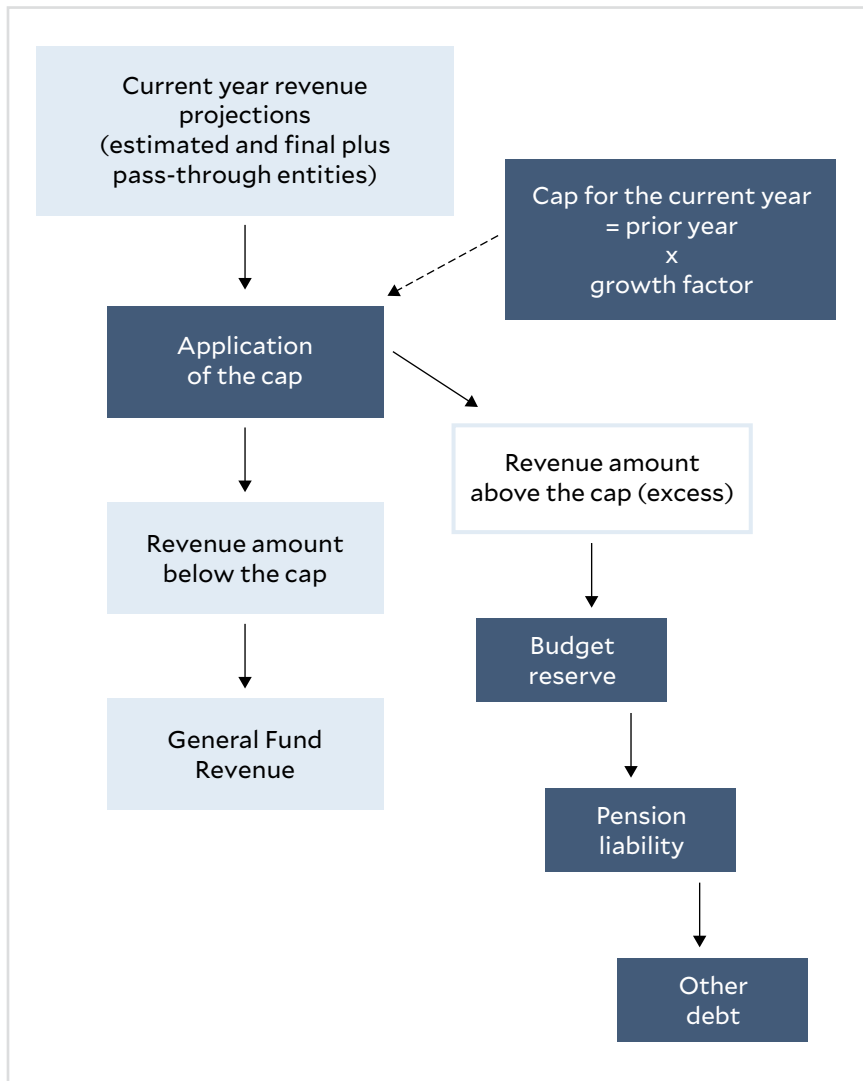
Mohit Agrawal is an applied microeconomist and a fourth-year PhD candidate in economics, a graduate policy fellow at Yale's Institute for Social and Policy Studies, and a visiting scholar at University of Chicago's Becker Friedman Institute. Agrawal served as deputy policy director and advisor to Governor Ned Lamont of Connecticut from 2019–2021. He received his BA in mathematics from Princeton University, and an MSc in applied statistics, as well as an MBA, from the University of Oxford.

ELIZA MCKENNEY *Research & Policy Program Manager, Tobin Center for Economic Policy at Yale*

Eliza McKenney is a research and policy program manager at the Tobin Center for Economic Policy. Prior to joining the Tobin Center, McKenney worked in economic consulting at Cornerstone Research where she collaborated with leading economic and financial academics. McKenney holds a BBA in finance and a BA in psychology from the College of William & Mary.

The volatility cap is one of the most innovative and impactful of Connecticut's fiscal guardrails. The volatility cap was designed to insulate the budget from the significant swings in revenue that had become a feature of Connecticut's budget landscape in the years following the Great Recession. It is based on the principle that unpredictable revenue sources should not be relied upon to fund predictable, recurring expenditures.<sup>1</sup>

Figure IV.A: Connecticut's volatility cap calculation



<sup>1</sup> "Connecticut's Fiscal Guardrails Treasurer's Office Inaugural Investor Conference," Connecticut State Treasurer's Office, 2023, <https://portal.ct.gov/-/media/opm/bud-other-projects/reports/other-reports/inaugural-ct-investor-conference--opm--fiscal-guardrails--may-23-2023.pdf>, 19.

The volatility cap limits the amount that the General Assembly can budget from Connecticut's most significant volatile revenue sources: taxes on pass-through entities and the estimated and final payments of the personal income tax.<sup>2</sup> The volatility cap statute establishes a base amount that is then adjusted annually. When tax receipts are estimated for the coming year, they are compared to the cap. Any revenues above the threshold are deemed excess and are unavailable for appropriation by the General Assembly and instead are transferred to the Budget Reserve Fund (BRF).<sup>3</sup>

The volatility cap was set at \$3.15 billion in 2018 and allowed to increase each year based upon the state's compound annual rate in personal income growth over the prior five calendar years using data reported by the federal Bureau of Economic Analysis.<sup>4</sup> Funds in excess of this amount are deposited into the BRF. Once the BRF reaches a set level (recently increased from 15 percent to 18 percent of the state's operating budget), any additional funds are to be used to pay down pension liabilities and debt (see Figure IV.A).

#### HOW DO WE KNOW IF THE VOLATILITY CAP IS "WORKING"?

There are many ways to conceptualize the volatility cap. One way is to assume that, as the name suggests, the cap should reduce or "smooth" volatility. If that is indeed the purpose, one might expect a well-designed cap to result in some years where actual revenue from volatile sources comes in below the cap and other years when revenue exceeds the cap, as depicted in Figure IV.B.

An alternative conception of the volatility cap might serve a different objective: not merely to smooth or reduce volatility, but to ensure that revenue from volatile sources will never – or at least very rarely – fall below the cap, to ensure maximum predictability. Another version of that approach might seek to ensure that actual revenue from volatile sources never – or very rarely – falls more than a certain amount below the threshold, such as 1.25 percent of total revenues or the amount of the "cushion" required by the revenue cap. A cap well-designed to achieve these objectives would be depicted as in Figure IV.C.

Connecticut's volatility cap has not, in practice, looked like either of these conceptualizations. Instead, actual revenues from sources included in the volatility cap base have come in high above the cap every year since the cap's enactment. From 2018 to 2023, the amount of volatile revenue that exceeded the volatility cap in a given year ranged from \$530 million to nearly \$3 billion, with an average of \$1.4 billion per year (see Figure IV.D).

<sup>2</sup> "Connecticut's Fiscal Guardrails Treasurer's Office Inaugural Investor Conference," 7. Smaller revenue sources such as the inheritance tax are more volatile but tend to make up less than a percent of state revenues. See, "Connecticut State Budget FY 24–FY 25," Office of Fiscal Analysis, [https://www.cga.ct.gov/ofa/Documents/year/BB/2023BB-20231005\\_FY%2024%20and%20FY%2025%20Connecticut%20Budget.pdf](https://www.cga.ct.gov/ofa/Documents/year/BB/2023BB-20231005_FY%2024%20and%20FY%2025%20Connecticut%20Budget.pdf), 401.

<sup>3</sup> "Sec. 4-30a. Transfer of surplus to Budget Reserve Fund, State Employees Retirement Fund and Teachers' Retirement Fund. Reduction of outstanding state indebtedness. Transfer of funds from Budget Reserve Fund," Chapter 47, State Property and Funds, General Statutes of Connecticut, [https://www.cga.ct.gov/current/pub/chap\\_047.htm#sec\\_4-30a](https://www.cga.ct.gov/current/pub/chap_047.htm#sec_4-30a).

<sup>4</sup> "Sec. 4-30a."

Figure IV.B: Conceptual depiction of a volatility cap with current policy volatility cap and hypothetical revenue

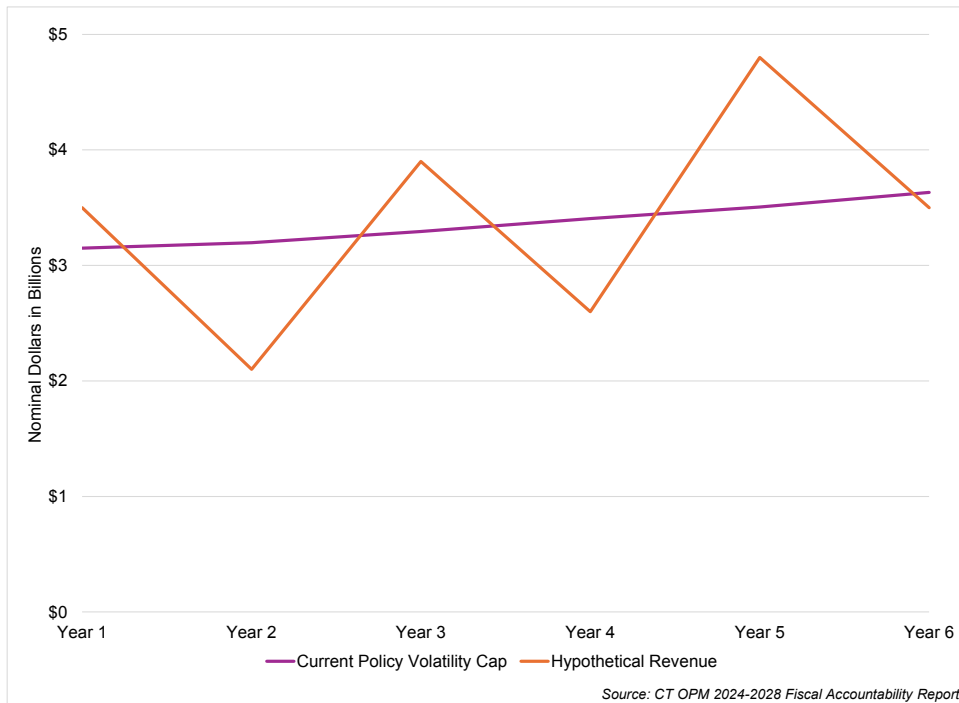


Figure IV.C: Conceptual depiction of a volatility cap with alternative volatility caps and hypothetical revenue

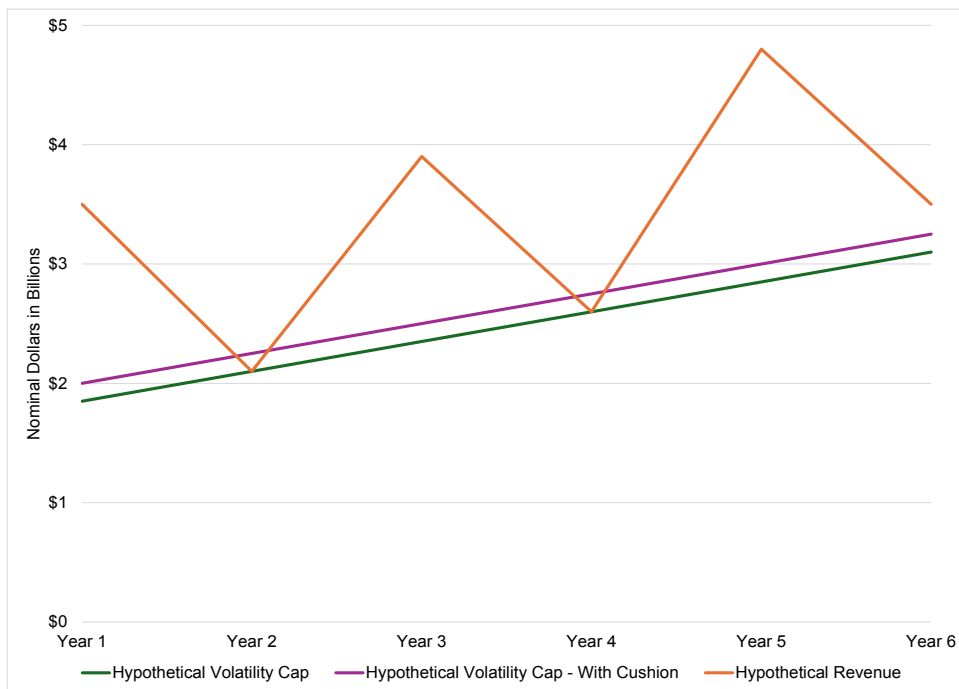
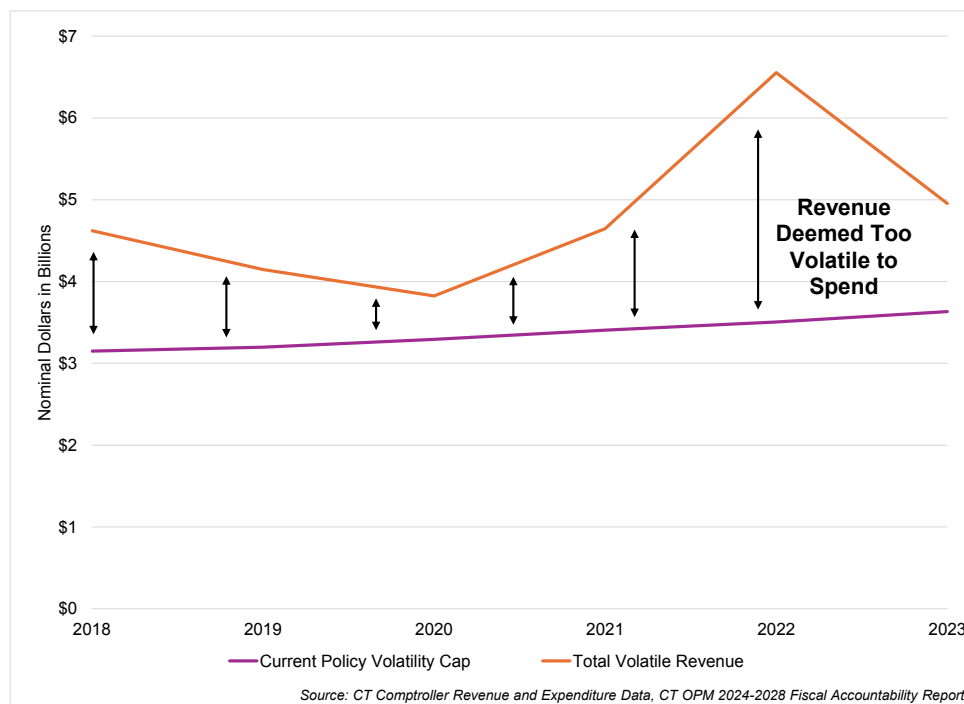


Figure IV.D: Connecticut's volatility cap in practice, 2018–2023



What these data and depictions suggest is that, as currently designed, Connecticut's volatility cap is doing more than protecting against volatility. Rather, it has worked to compel substantial annual transfers into pension funds and other long-term liabilities, beyond what is budgeted and required by the actuarially required contributions to the pension funds.

Creating a structural surplus that must be deposited into the pension funds is a legitimate policy objective. However, if the purpose of the volatility cap is indeed to guard against volatility, it is worth examining whether alternatives to the current cap design might achieve that purpose, while putting less revenue "off limits" for expenditure on current programs and services.

## ALTERNATIVE APPROACHES TO THE VOLATILITY CAP

### Changes to the Base

One possibility for adjusting the volatility cap is to reconsider the sources of revenue that are deemed volatile. Under current policy, two sources of revenue represent the base for the volatility cap—the pass-through entity (PTE) tax and estimated and final payments (EFP) from the personal income tax. These revenue sources represented about 21 percent of total state revenue in FY23.

Both sources have demonstrated volatility over time. However, they are not the only volatile sources of revenue. Other volatile revenue lines include the inheritance tax, the real estate tax,



and the reported personal income tax refunds. An earlier volatility cap model, which was enacted in 2015 but was superseded by the current cap formula before it went into effect, included the corporate business tax.<sup>5</sup>

In short, identifying the sources of revenue that should be included in the base for a volatility cap is a matter of discretion and choice. Arguably, the base should reflect the intended goals of the policy. If the goal is to provide a check on policymakers when revenue dramatically exceeds expectations, then it may make sense to broadly define the base with the cap set so that extraordinary peaks and drops are apparent. In contrast, if the goal is to make fairly regular contributions to savings that accumulate over time, a narrow base with a relatively low cap set such that most of the revenue from that source is directed to reserves might be preferred.

Given that current policy applies to 21 percent of total state revenues, we explored what alternative volatility cap bases might look like that represent both a smaller and larger share of total state revenue:

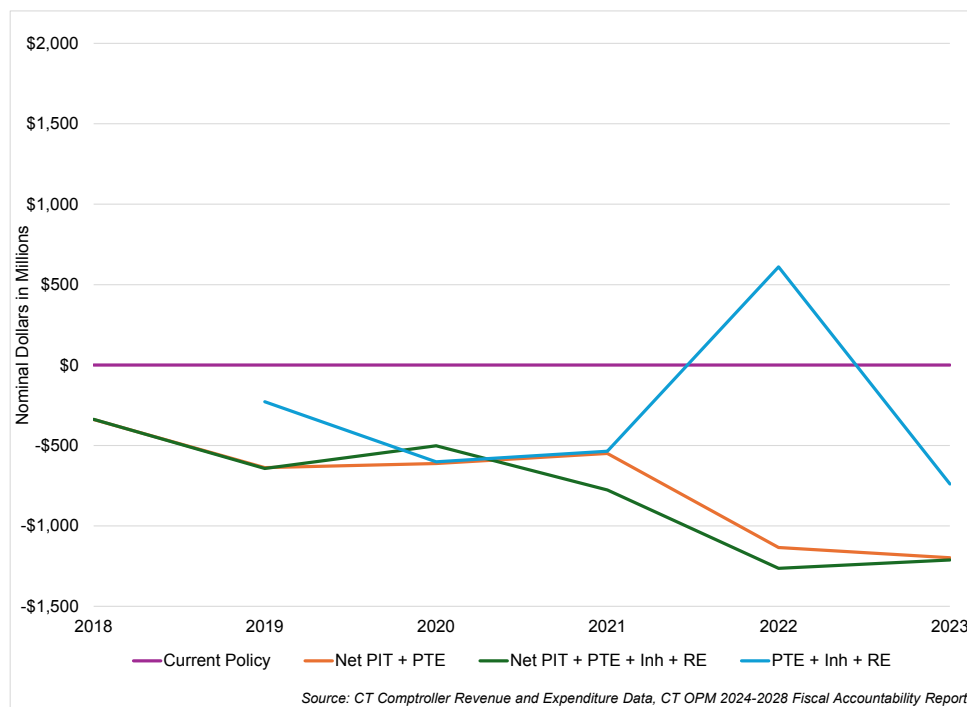
- A base that includes net personal income tax, which includes withholdings plus estimated and final payments less refunds, (Net PIT) and the pass-through entity tax (PTE): 49 percent of 2023 General Fund revenues
- A base that includes Net PIT, PTE, inheritance (Inh), and real estate (RE): 51 percent of 2023 General Fund revenues
- A base that includes just PTE, inheritance, and real estate: 11 percent of 2023 General Fund revenues

To compare these options, we first calculate what the new base would have been in 2018 (i.e., 99.55 percent of the 2017 reported level<sup>6</sup>) and then increase it each year based on the current deflator (i.e., the five-year compound annual growth in Connecticut personal income). Figure IV.E reports the impact of these different options, showing how much more or less revenue would be available to policy makers relative to current policy.

<sup>5</sup> “Annual Report of the State Comptroller Statutory Basis (GAAP Based Budgeting),” Kevin Lembo, State Comptroller, 2015, <https://osc.ct.gov/wp-content/uploads/2024/03/AnnualReportOfTheStateComptroller-Budgetary-Basis-2015.pdf>.

<sup>6</sup> 99.55% is the proportion of FY17 revenues (\$3.2 billion) that makes up the FY18 volatility cap (\$3.15 billion).

Figure IV.E: Freed up revenue from narrowing and broadening of the volatility cap base, 2018–2023



Note: For the PTE + Inh + RE analysis, the 2019 data point is excluded because the PTE tax was established as a separate tax revenue stream in 2019, meaning it cannot be distinctly incorporated into the 2018 data point. Prior to 2019, PTE was part of the EFP tax revenue stream.

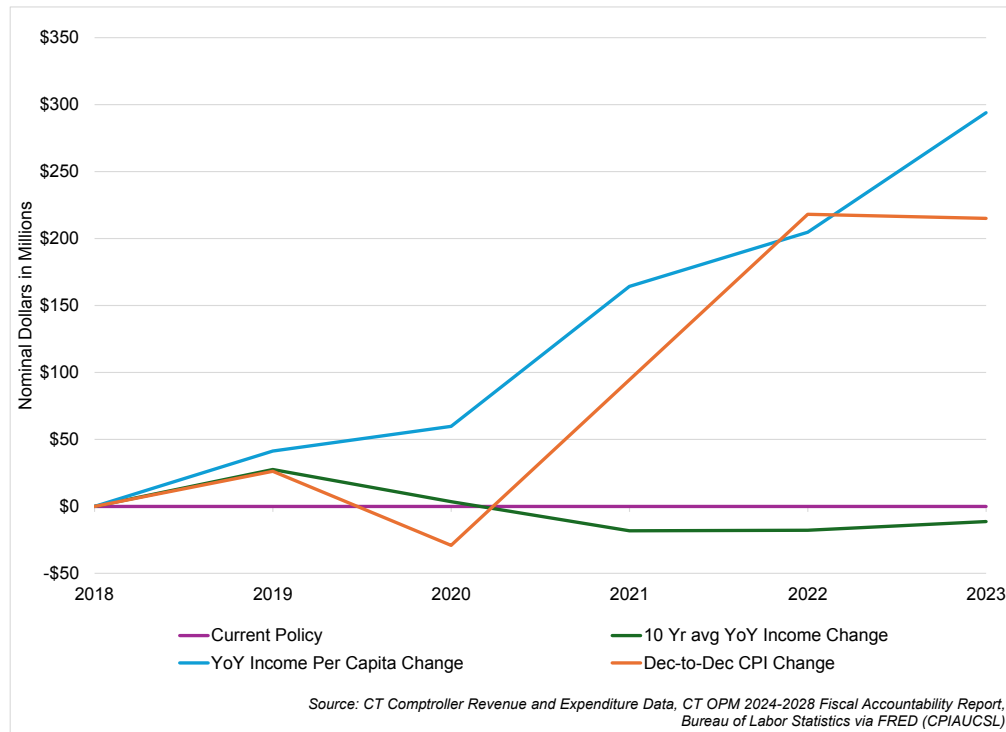
How one conceives of volatility might drive whether the cap is designed using a broad or narrow base. A narrow base targets more unreliable but smaller sources of state revenues, allowing for other more “moderate” net fluctuations in revenue. A broad base for calculating volatility suggests a focus on fiscal discipline and the setting aside of resources for future expected downturns. As noted above, we constrained the comparison to use the same approach to calculating the base year as exists in current policy (e.g., 99.55 percent of 2017 levels). Below, we demonstrate the extent to which this analysis is sensitive to the choice of the base year.

### Changes to the Growth Calculation

A second option for modifying the volatility cap is to change the method by which the amount of allowable annual growth under the cap is calculated. As noted above, current policy applies the compound rate of growth in Connecticut’s total personal income over the prior five calendar years, starting from a base amount of \$3.15 billion in 2018.

We explore alternative ways to adjust the base from one year to the next in an effort to calculate the impact on available revenue. We first calculate the impact of using a simple ten-year average change in personal income as a way to smooth short-term trends driven by the business cycle. In an effort to account for changes in population, we analyze year-over-year changes in income per capita for the deflator. Finally, we used the year-over-year change in the December consumer price index (CPI) for urban consumers.

Figure IV.F: Freed up revenue from static modification of the volatility cap calculation, 2018–2023



The impact of these changes is relatively modest (Figure IV.F). For example, while substituting the December-to-December CPI growth frees up over \$200 million in 2022 and 2023, it also can produce a tighter cap in some years. This analysis suggests that an approach which uses *the greater* of a five-year compound average personal income growth or annual CPI growth, as is done with the spending cap, might have some merit.

### Rethinking the Base Year: A Static and Dynamic Approach

It is important to recognize that the initial base value for the volatility cap, which was set at \$3.15 billion in 2018, was not based on a thorough examination of trends over a multi-year period. Rather, it was simply, and rather arbitrarily, pegged relative to the amount of revenue collected from EFP taxes from 2017 (including the revenues that would be later broken out into the PTE tax), the last year before the guardrails package was negotiated.

Given the actual performance of the volatility cap, with revenues consistently and often substantially above the cap, one could question whether the base was set appropriately. To demonstrate the impact of the choice of the starting year, we (1) replicate the rate of growth used under current policy, then (2) reset the base year to 2008, 2013, and 2019 (five and ten years prior to, and one year after, the 2018 reference year currently used). The choice of a base year has a powerful impact.

For example, setting the base year to 2013 and growing the cap each year at the five-year compound rate of personal income growth would have resulted in a cap threshold approximately \$520 to \$600 million higher than the current threshold (Figure IV.G), freeing up those resources for current spending while still producing surpluses in the majority of years. Resetting the base year to 2008 has an even greater impact, raising the cap and freeing up an average of \$1.0 billion per year. Finally, recalibrating the calculation to use 2019 revenue figures for EFP and PTE taxes as the cap (i.e., using \$4.15 billion instead of \$3.2 billion for that year) frees up \$900 to \$950 million in each of the subsequent years.

Figure IV.G: Freed up revenue from a static approach to resetting the volatility cap base, 2018–2023 (nominal dollars in millions)

<b>Reset Year</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Reset to 2019			\$943	\$928	\$925	\$907
Reset to 2013	\$601	\$601	\$586	\$563	\$552	\$524
Reset to 2008	\$1,016	\$1,021	\$1,016	\$1,003	\$1,002	\$985

*Source: CT Comptroller Revenue and Expenditure Data, Bureau of Economic Analysis (SAINC1)*

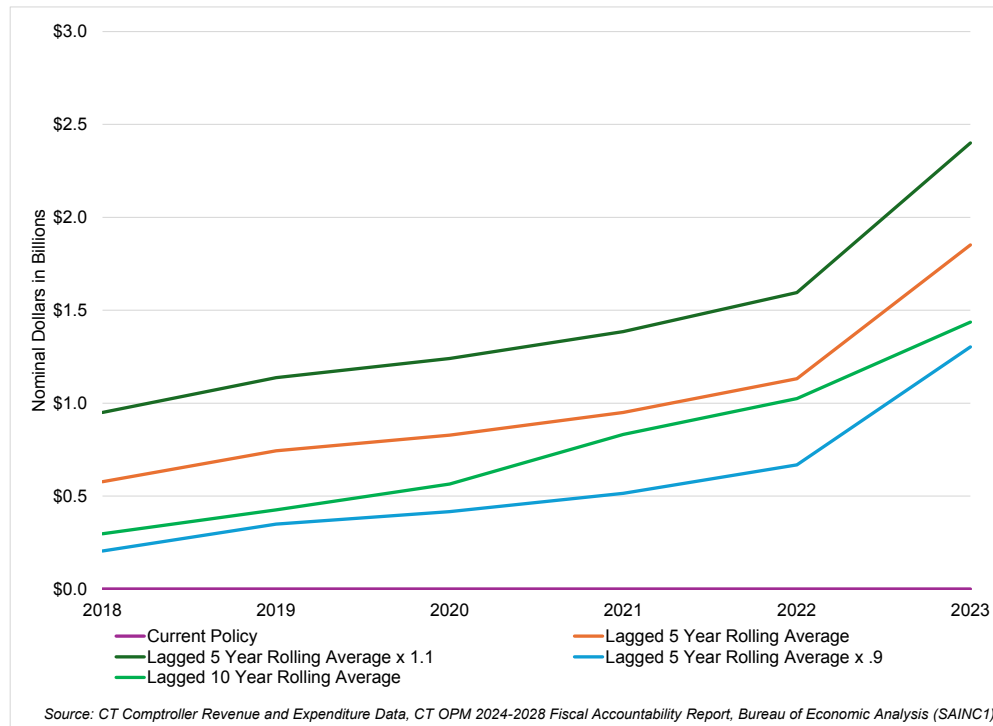
The cap's sensitivity to the choice of a base year, and the relatively arbitrary way in which the current base year was selected, is an argument in support of rethinking how the base is chosen and whether it is possible to periodically update the provisions of the cap to reflect more accurately the longer-term shifts in the economy.

The above comparisons took a static approach, making a single change while holding other factors constant. We also explored what would happen if the structure of the cap employed a dynamic look back at the trends in these revenue sources, then carried that process forward into future years to establish a cap level. To provide an example of what a more dynamic cap might look like, we took the following steps.

- We draw upon data going back sixteen years (2008–2023).
- Beginning in 2018, we estimate an average base of volatile revenues (EFP and PTE) based upon the prior ten years' revenues in real dollars for each year (e.g., for 2018, we convert revenues in 2008 through 2017 to 2018 dollars, then average them).
- We roll that process forward in subsequent years.

We performed a similar process using a five year look back to determine the averages beginning with 2013. We also apply multipliers of 1.1 and 0.9 in order to test an explicitly “looser” and “tighter” cap, respectively.

Figure IV.H: Freed up revenue using a 5- and 10-year dynamic volatility cap calculation, 2018–2023



This dynamic approach retains the spirit of the original cap structure by placing revenue off limits when volatile revenue sources come in unusually high, while at the same time establishing a cap threshold that is more responsive to longer-term changes in the state's economy. Depending on the dynamic model chosen and the year, the amount of additional room under the cap ranges from \$205 million to over \$2.4 billion.

It is important to note that under most of these sensitivities in the dynamic approach, revenue levels continue to exceed the cap, resulting in surplus transfers to the BRF and potentially to pensions (depending on the level of surplus). Under the five-year lagged average sensitivity, the average transfer to the BRF over the period would have been \$413 million per year, for a total of \$2.5 billion. Under the ten-year lagged average sensitivity, the average transfer is \$663 million or \$4.0 billion total. These figures compare to the current policy of \$8.6 billion transferred to the BRF and pensions over the same six years.<sup>7</sup>

<sup>7</sup> "Fiscal Accountability Report Fiscal Years 2025-2028," Jeffrey R. Beckham, Office of Policy and Management, 2024, [https://portal.ct.gov/-/media/opm/budget/fiscalaccountability/opm-2024-fiscal-accountability-report-final.pdf?rev=62b1ee2e4449447aae844475a9a500c7&hash=C76D46300CDD088FFD55F6A05E6CA60C\\_52](https://portal.ct.gov/-/media/opm/budget/fiscalaccountability/opm-2024-fiscal-accountability-report-final.pdf?rev=62b1ee2e4449447aae844475a9a500c7&hash=C76D46300CDD088FFD55F6A05E6CA60C_52); "Treasurer Erik Russell Deposits \$608.2 Million Volatility Transfer into State Pension Funds," The Office of Treasurer Erik Russell, State of Connecticut's Treasurer's Office, 2024, [https://portal.ct.gov/ott/newsroom/news/news-releases/volatilitytransfer\\_fy24](https://portal.ct.gov/ott/newsroom/news/news-releases/volatilitytransfer_fy24).

## VOLATILITY CAP AND THE RISK OF AN ECONOMIC DOWNTURN

One potential concern about adjusting the volatility cap threshold is that the volatility cap would serve as an important shock absorber in the event of a substantial reduction in revenue during an economic downturn. A recession could indeed result in a revenue decline that exceeds the cushion currently provided by the volatility cap.

While the volatility cap provides an important hedge against recession, however, it is not Connecticut's only fiscal shock absorber. As discussed in Overview of the Caps, the revenue cap requires an additional cushion of 1.25 percent to be built into every adopted budget. More important, Connecticut's Budget Reserve Fund, the primary fiscal shock absorber, is currently funded at the statutory cap of 18 percent of budget or an estimated \$4.1 billion for FY24.<sup>8</sup> In addition, lawmakers have the ability to reduce spending in response to reductions in revenue and would likely do so in the face of a severe recession. There is no reason to believe that the volatility cap was intended to remove all risk of future revenue reductions.<sup>9</sup>

To the extent that policymakers seek to insulate the state budget more fully from revenue decline during the most severe economic recessions, such as that experienced following the historic 2008 financial crisis, that objective could also be achieved by lifting the cap on contributions to the Budget Reserve Fund. Adjusting the volatility cap downward, while adjusting the Budget Reserve Fund cap upward, could allow the state to utilize more revenue for current priorities while increasing the state's ability to absorb the most severe declines in revenue.

Ultimately, striking the appropriate balance between long-term savings in the form of supplemental pension contributions, protection against economic downturns by building the Budget Reserve Fund, smoothing revenue projections year to year, and meeting current needs through spending requires policymakers to weigh priorities. Again, we do not advocate for the volatility cap threshold to be adjusted to a particular level. Our analysis simply suggests that there is room to adjust the volatility cap, perhaps using a dynamic volatility cap threshold, in a way that allows additional revenue to be utilized for current needs, while still guarding against the kind of volatility experienced in the years prior to the establishment of the fiscal guardrails.

8 "Fiscal Accountability Report Fiscal Years 2025–2028," 49.

9 Office of Policy and Management models published in the most recent Fiscal Accountability Report demonstrate that Connecticut could reduce the volatility cap threshold by roughly \$500 million annually and still remain fully insulated, over a two-year period, from a recession of the severity experienced in 2002–2003 following the bursting of the dot-com bubble, should policymakers choose to utilize the full Budget Reserve Fund rather than reducing spending. A recession of the severity experienced following the historic 2008 financial crisis would result in revenue declines that exceed both the cushion provided by the volatility cap and the Budget Reserve Fund. As a result, a recession of such severity would require spending adjustments regardless of where the volatility cap threshold is set. See, "Fiscal Accountability Report Fiscal Years 2025–2028," 16.

## CONCLUSION

Measuring the success of the volatility cap ultimately depends on the objective against which it is measured. However, if the cap is intended, as its name suggests, to insulate the state budget from the unpredictability of revenue *volatility*, its current design appears to cast too wide a net. Taking the dynamic approach outlined above would allow the state to guard against volatility, while being more responsive to economic growth and actual revenue collections over a period of years. In designing a dynamic volatility cap, the state could also choose to embrace a more- or less-cautious approach, depending on policymakers' preference.

Without advocating for any particular model, these illustrative examples demonstrate that there are theoretically-sound and data-supported alternatives to the current cap design that achieve the objectives of reducing uncertainty and promoting fiscal stability. In many years – and certainly over a period of years, taken in the aggregate – these alternative designs would continue to compel additional savings, albeit to a lesser degree than current policy.

As a result of the “bond lock” described in the “Overview” paper, it would be difficult to amend the statutory formula by which the volatility threshold is set prior to FY28. However, with a three-fifths vote in both chambers, the General Assembly could reset the volatility threshold “due to changes in state or federal tax law or policy or significant adjustments to economic growth or tax collections.”<sup>10</sup> Should they choose to do so, the General Assembly could utilize the kind of dynamic model described above to inform such an adjustment.

<sup>10</sup> “Sec. 4-30a. Transfer of surplus to Budget Reserve Fund, State Employees Retirement Fund and Teachers' Retirement Fund. Reduction of outstanding state indebtedness. Transfer of funds from Budget Reserve Fund,” Chapter 47, State Property and Funds, General Statutes of Connecticut, [https://www.cga.ct.gov/current/pub/chap\\_047.htm#sec\\_4-30a](https://www.cga.ct.gov/current/pub/chap_047.htm#sec_4-30a).

# Connecticut's Fiscal Guardrails: A Data-Driven Analysis

## Connecticut's Spending Cap: A Closer Look

ZACHARY LISCOW *Yale Law School*

LUKE BRONIN *Yale Law School / The Connecticut Project*

NATHANAEL MCLAUGHLIN *Tobin Center for Economic Policy at Yale University*

PATRICK J. MURPHY *University of San Francisco*

MOHIT AGRAWAL *Yale Department of Economics*

ELIZA MCKENNEY *Tobin Center for Economic Policy at Yale University*

DECEMBER 2024

A joint research effort between [The Tobin Center for Economic Policy](#)  
and [The Connecticut Project](#)

Copyright © Yale University. All rights reserved.



## CONTRIBUTORS

ZACHARY LISCOW *Yale Law School*

Zachary Liscow is professor of law at Yale Law School, served as chief economist at the Office of Management and Budget at the White House from 2022–2023, and was a staff economist at the White House Council of Economic Advisers from 2009–2010. Liscow earned his PhD in economics from the University of California, Berkeley, and his JD from Yale Law School, as well as a degree in economics and in environmental science and public policy from Harvard College.

LUKE BRONIN *Visiting Lecturer in Law, Yale Law School / The Connecticut Project*

Luke Bronin is a visiting lecturer in law, senior research scholar in law, and Tsai leadership senior distinguished fellow in residence at Yale Law School and most recently served two terms as Mayor of Hartford, Connecticut. Bronin was general counsel to then-governor of Connecticut Dannel P. Malloy from 2013–2015 and prior to that served in the Obama administration at the US Department of the Treasury. Bronin was an officer in the US Navy Reserve. Bronin received a BA from Yale College, an MSc from the University of Oxford, and a JD from Yale Law School.

NATHANAEL MCLAUGHLIN *Policy Fellow, Tobin Center for Economic Policy at Yale*

Nat McLaughlin is a policy fellow at the Tobin Center for Economic Policy, previously held the role of policy advisor to Connecticut's Chief Budget Officer, and also served as a naval officer. McLaughlin holds an MA in global affairs and an MBA from Yale University, a Master's in national defense and security studies from the US Naval War College, and a BS in industrial engineering from Northwestern University.

PATRICK J. MURPHY *Professor, University of San Francisco*

Patrick J. Murphy is a professor and faculty director for the Urban and Public Affairs program at the University of San Francisco. He currently serves as the director of resource equity and public finance for The Opportunity Institute. Previously, Murphy worked at the US Office of Management and Budget, as a consultant for state and local government, and at Arnold Ventures. Murphy received a BA from the University of Notre Dame, an MPA from the University of Texas-Austin, and a PhD and MA from the University of Wisconsin-Madison.

MOHIT AGRAWAL *PhD Candidate, Yale Department of Economics*

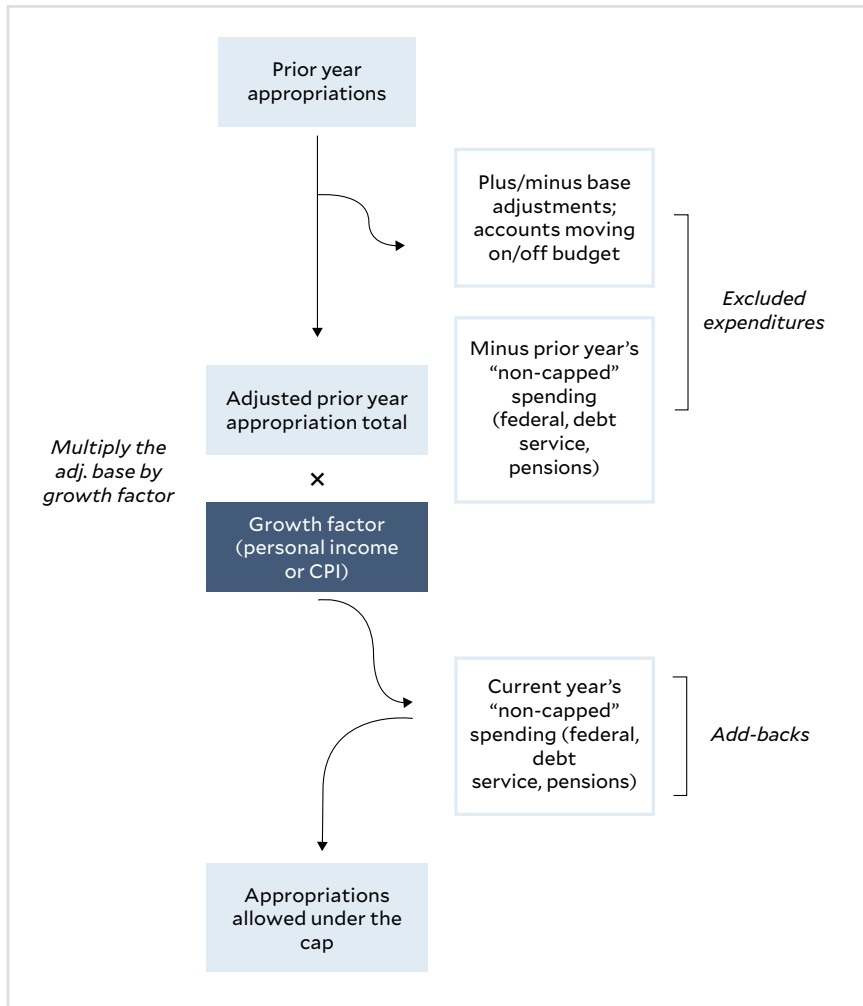
Mohit Agrawal is an applied microeconomist and a fourth-year PhD candidate in economics, a graduate policy fellow at Yale's Institute for Social and Policy Studies, and a visiting scholar at University of Chicago's Becker Friedman Institute. Agrawal served as deputy policy director and advisor to Governor Ned Lamont of Connecticut from 2019–2021. He received his BA in mathematics from Princeton University, and an MSc in applied statistics, as well as an MBA, from the University of Oxford.

ELIZA MCKENNEY *Research & Policy Program Manager, Tobin Center for Economic Policy at Yale*

Eliza McKenney is a research and policy program manager at the Tobin Center for Economic Policy. Prior to joining the Tobin Center, McKenney worked in economic consulting at Cornerstone Research where she collaborated with leading economic and financial academics. McKenney holds a BBA in finance and a BA in psychology from the College of William & Mary.

The spending cap ties growth in state appropriations to growth in the state's economy, using the prior year's actual spending as the base and applying a growth rate to determine allowable appropriations for the current year.

Figure V.A: Connecticut's spending cap calculation



To calculate the maximum allowable growth in spending from one year to the next, the base is adjusted by the compound annual growth in personal income over the prior five years (Bureau of Economic Analysis) or the annual increase in the consumer price index (CPI) measured in December (Bureau of Labor Statistics), whichever is greater.<sup>1</sup> After adjusting for growth, the items that had previously been excluded from the calculation are added back, producing the limit for appropriations for the current year.

<sup>1</sup> “Sec. 2-33a. Limitation on expenditures authorized by General Assembly. Base year adjustment for certain expenditures,” Chapter 16, General Assembly, General Statutes of Connecticut, [https://www.cga.ct.gov/current/pub/chap\\_016.htm#sec\\_2-33a](https://www.cga.ct.gov/current/pub/chap_016.htm#sec_2-33a).

According to the Connecticut state treasurer's office, the growth in personal income test has been applied twenty-seven times while the CPI has been applied as the deflator only five times over the period 1993 to 2024.<sup>2</sup>

### MODIFYING THE SPENDING CAP

Connecticut's constitution dictates key elements of the spending cap. The constitution prohibits increases in appropriations above the prior year's general budget expenditures by more than the increase in personal income or the increase in inflation, whichever is greater. The constitution leaves it to the General Assembly to define the terms "increase in personal income," "increase in inflation," and "general budget expenditures." Those definitions may be amended by a three-fifths majority of the members of each house of the legislature.<sup>3</sup>

Spending may exceed the cap when the Governor declares an "emergency or the existence of extraordinary circumstances" and at least three-fifths of the members of each house of the General Assembly vote in support.<sup>4</sup> If the limit is raised, the amount budgeted in that year becomes the new base going forward. The Governor has issued a declaration to exceed the cap seven times since it was imposed in 1991, most recently during the 2007–2009 budget cycle.<sup>5</sup>

### Examining the Current Base

Precisely what spending is included within the category of "general budget expenditures" has changed over time, and much of the discussion about the spending cap debate has focused on that definition. For example, aid to distressed municipalities was initially excluded from the cap. Today, it is included.

Beyond the definition of "general budget expenditures," it is worth looking at a more fundamental feature of the spending cap design: the fact that the spending cap base begins with the prior year's appropriations, rather than what *could have been* appropriated under the prior year's spending cap.

There are significant consequences to that choice. If a particular year's appropriations fall below the allowed cap level, the following year's cap is ratcheted down to the lower appropriations mark. That lower spending cap threshold is then carried forward in subsequent years, resulting in a long-term downward shift.

This downward shift is, in fact, what happened during the period between FY17 and FY19. Because spending was reduced in response to revenue shortfalls, the General Assembly did not

<sup>2</sup> "Connecticut's Fiscal Guardrails Treasurer's Office Inaugural Investor Conference," Connecticut State Treasurer's Office, 2023, <https://portal.ct.gov/-/media/opm/bud-other-projects/reports/other-reports/inaugural-ct-investor-conference--opm--fiscal-guardrails--may-23-2023.pdf>, 5.

<sup>3</sup> "Article III, Section 18(b)," Constitution of the State of Connecticut, 2023, [https://www.cga.ct.gov/asp/Content/constitutions/Constitution\\_State\\_CT.pdf](https://www.cga.ct.gov/asp/Content/constitutions/Constitution_State_CT.pdf), 115.

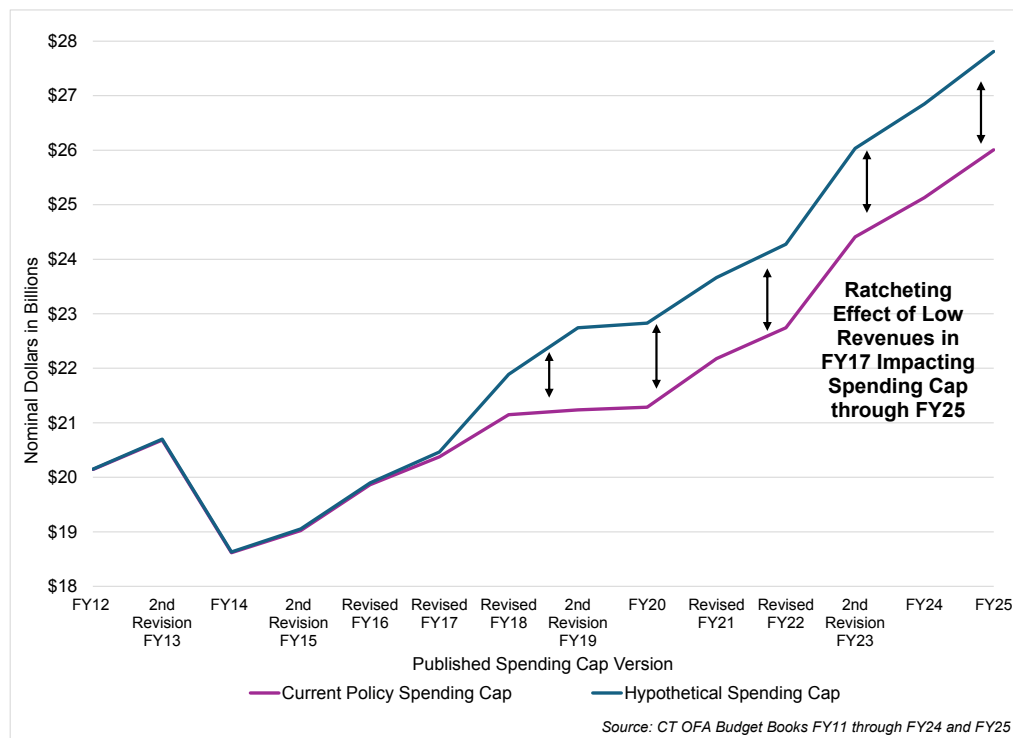
<sup>4</sup> "Sec. 2-33a."

<sup>5</sup> "Connecticut State Budget 2007–2009," Office of Fiscal Analysis. [https://www.cga.ct.gov/ofa/Documents/year/BB/2008BB-20071200\\_FY%2008%20-%20FY%2009%20Connecticut%20Budget.pdf](https://www.cga.ct.gov/ofa/Documents/year/BB/2008BB-20071200_FY%2008%20-%20FY%2009%20Connecticut%20Budget.pdf).

appropriate funds to the level that the spending cap would have allowed.<sup>6</sup> That reduction in spending effectively reset the base, so that the amount of spending allowable under the cap was approximately \$1.8 billion lower in FY25 than it would have been if the General Assembly had appropriated funds up to the allowable cap in earlier years (see Figure V.B).

In other words, because of weak revenues in 2017 and 2018, the spending cap adjusted downward and, as designed, could not adjust to catch up with economic growth in the years that followed (see Figure V.B).

Figure V.B: Additional spending cap space using prior year spending cap as alternative base, FY12–FY25



As policymakers examine the cumulative effects of the spending cap, this feature of the current spending cap deserves examination. Conceptually, the spending cap is meant to rise in a way that is consistent with economic growth in Connecticut over time. Setting the spending cap with reference to the prior year's spending cap, rather than prior year appropriations, would avoid the potential decoupling of spending and growth.

<sup>6</sup> Revenues for FY17 were projected at \$20.6 billion with a spending cap of \$20.4 billion, but actual revenues ended up at \$19.8 billion. The General Assembly ultimately appropriated \$19.7 billion for FY17. See, "Connecticut State Budget FY 16 & FY 17," Office of Fiscal Analysis, [https://www.cga.ct.gov/ofa/Documents/year/BB/2016BB-20151007\\_FY%2016%20and%20FY%2017%20Connecticut%20Budget.pdf](https://www.cga.ct.gov/ofa/Documents/year/BB/2016BB-20151007_FY%2016%20and%20FY%2017%20Connecticut%20Budget.pdf), 2; "Connecticut State Budget FY 17 Revisions," Office of Fiscal Analysis, [https://www.cga.ct.gov/ofa/Documents/year/BB/2017BB-20161101\\_FY%2017%20Connecticut%20Budget%20Revisions.pdf](https://www.cga.ct.gov/ofa/Documents/year/BB/2017BB-20161101_FY%2017%20Connecticut%20Budget%20Revisions.pdf), 6; "Connecticut State Budget FY 18 & FY 19 Budget," Office of Fiscal Analysis, [https://www.cga.ct.gov/ofa/Documents/year/BB/2018BB-20180214\\_FY%2018%20and%20FY%2019%20Connecticut%20Budget.pdf](https://www.cga.ct.gov/ofa/Documents/year/BB/2018BB-20180214_FY%2018%20and%20FY%2019%20Connecticut%20Budget.pdf), 11.

As the constitutional spending cap language explicitly refers to the prior year's authorized spending as the base, a constitutional amendment would be required to make such a change to the spending cap design. However, the governor and the General Assembly could, pursuant to a declaration of extraordinary circumstances and a three-fifths vote, make a one-time adjustment to the base to account for the downward shift in spending that resulted from the 2017 revenue decline. Because adjustments to the spending cap base carry forward into future years, such an adjustment would allow policymakers to counteract the effect of the one-way ratchet.

#### CURRENT MECHANISMS TO AVOID THE SPENDING CAP

In part due to the procedural hurdles of amending the spending cap, the General Assembly has employed a number of methods for avoiding the constraints of the spending cap.

The spending cap is really an "appropriations cap," limiting the amount that is appropriated in any given year. As a result, if budgeted funds are left unspent in one year, they can be "carried forward" and spent in the next year, above the cap. The use of carryforwards has become routine practice and was done most recently in the 2024 legislative session.

In addition, the General Assembly can establish "revenue intercepts," diverting revenue to a dedicated purpose outside of the appropriations process. Finally, policymakers may rely more heavily on tax expenditures or on bonding than they otherwise would in the absence of the spending cap.

While such methods of avoiding the constraints of the cap are legal, they risk decreasing budget transparency and increasing inefficiency. To the extent that policymakers find themselves routinely structuring around the existing cap, more direct and transparent changes to the spending cap's design may be warranted.

# Connecticut's Fiscal Guardrails: A Data-Driven Analysis The Impact of the Caps

ZACHARY LISCOW *Yale Law School*

LUKE BRONIN *Yale Law School / The Connecticut Project*

NATHANAEL MCLAUGHLIN *Tobin Center for Economic Policy at Yale University*

PATRICK J. MURPHY *University of San Francisco*

MOHIT AGRAWAL *Yale Department of Economics*

ELIZA MCKENNEY *Tobin Center for Economic Policy at Yale University*

DECEMBER 2024

A joint research effort between [The Tobin Center for Economic Policy](#)  
and [The Connecticut Project](#)

Copyright © Yale University. All rights reserved.

## CONTRIBUTORS

ZACHARY LISCOW *Yale Law School*

Zachary Liscow is professor of law at Yale Law School, served as chief economist at the Office of Management and Budget at the White House from 2022–2023, and was a staff economist at the White House Council of Economic Advisers from 2009–2010. Liscow earned his PhD in economics from the University of California, Berkeley, and his JD from Yale Law School, as well as a degree in economics and in environmental science and public policy from Harvard College.

LUKE BRONIN *Visiting Lecturer in Law, Yale Law School / The Connecticut Project*

Luke Bronin is a visiting lecturer in law, senior research scholar in law, and Tsai leadership senior distinguished fellow in residence at Yale Law School and most recently served two terms as Mayor of Hartford, Connecticut. Bronin was general counsel to then-governor of Connecticut Dannel P. Malloy from 2013–2015 and prior to that served in the Obama administration at the US Department of the Treasury. Bronin was an officer in the US Navy Reserve. Bronin received a BA from Yale College, an MSc from the University of Oxford, and a JD from Yale Law School.

NATHANAEL MCLAUGHLIN *Policy Fellow, Tobin Center for Economic Policy at Yale*

Nat McLaughlin is a policy fellow at the Tobin Center for Economic Policy, previously held the role of policy advisor to Connecticut's Chief Budget Officer, and also served as a naval officer. McLaughlin holds an MA in global affairs and an MBA from Yale University, a Master's in national defense and security studies from the US Naval War College, and a BS in industrial engineering from Northwestern University.

PATRICK J. MURPHY *Professor, University of San Francisco*

Patrick J. Murphy is a professor and faculty director for the Urban and Public Affairs program at the University of San Francisco. He currently serves as the director of resource equity and public finance for The Opportunity Institute. Previously, Murphy worked at the US Office of Management and Budget, as a consultant for state and local government, and at Arnold Ventures. Murphy received a BA from the University of Notre Dame, an MPA from the University of Texas-Austin, and a PhD and MA from the University of Wisconsin-Madison.

MOHIT AGRAWAL *PhD Candidate, Yale Department of Economics*

Mohit Agrawal is an applied microeconomist and a fourth-year PhD candidate in economics, a graduate policy fellow at Yale's Institute for Social and Policy Studies, and a visiting scholar at University of Chicago's Becker Friedman Institute. Agrawal served as deputy policy director and advisor to Governor Ned Lamont of Connecticut from 2019–2021. He received his BA in mathematics from Princeton University, and an MSc in applied statistics, as well as an MBA, from the University of Oxford.

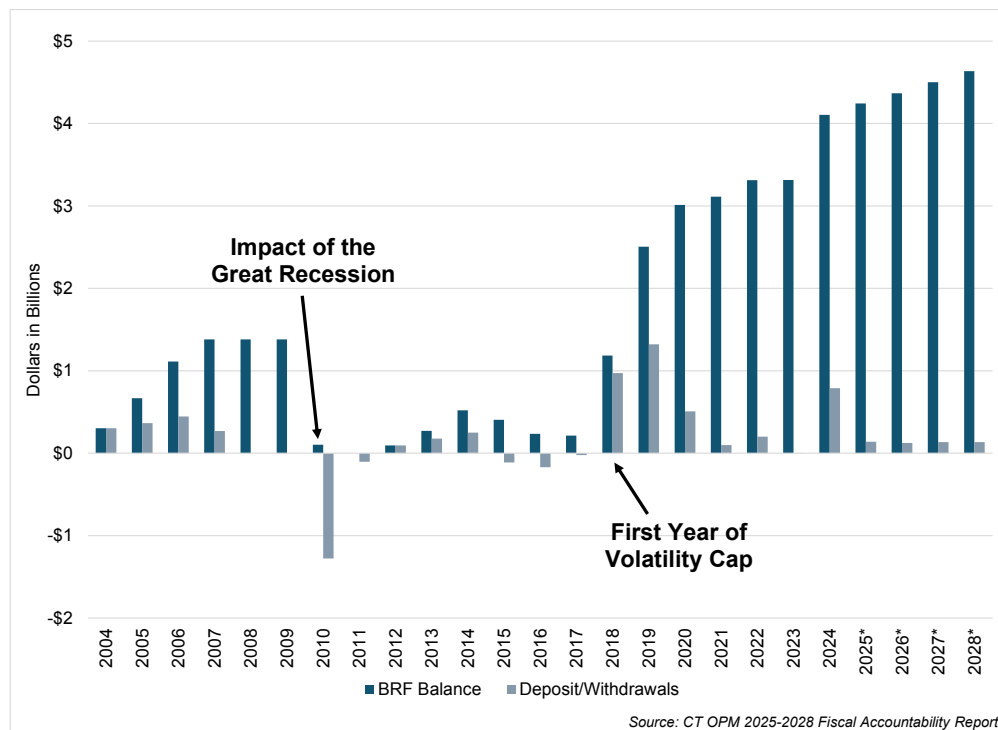
ELIZA MCKENNEY *Research & Policy Program Manager, Tobin Center for Economic Policy at Yale*

Eliza McKenney is a research and policy program manager at the Tobin Center for Economic Policy. Prior to joining the Tobin Center, McKenney worked in economic consulting at Cornerstone Research where she collaborated with leading economic and financial academics. McKenney holds a BBA in finance and a BA in psychology from the College of William & Mary.

### IMPROVING CONNECTICUT'S LONG-TERM FISCAL STRENGTH

Over the past seven years, Connecticut's fiscal guardrails have contributed to a substantial increase to the state's readiness to absorb a fiscal shock. The state's Budget Reserve Fund (BRF), or "rainy day fund," has grown from zero and near-zero during the years following the Great Recession to \$4.1 billion in FY25 (see Figure VI.A), representing approximately 18 percent of the current budget.<sup>1</sup>

Figure VI.A: Overall balance and changes in the Budget Reserve Fund, 2004–2028



The impact of the guardrails on long-term liabilities also has been significant. As a result of the fiscal guardrails, more than \$8.6 billion in surplus funds has been paid into the pension funds since FY20, on top of the annual actuarially required contributions.<sup>2</sup>

1 "October Comptroller Letter," Jeffrey R. Beckham, Office of Policy and Management, [https://portal.ct.gov/-/media/opm/budget/comptrollerletter/fy-2025/fy-25\\_october\\_2025\\_comptroller\\_letter.pdf?rev=f97b38a50671458abc3e8db2ee91bef&hash=1A8AAB1514C5CEC3078EC8F7A928B9D5](https://portal.ct.gov/-/media/opm/budget/comptrollerletter/fy-2025/fy-25_october_2025_comptroller_letter.pdf?rev=f97b38a50671458abc3e8db2ee91bef&hash=1A8AAB1514C5CEC3078EC8F7A928B9D5), Statement 1.

2 "Fiscal Accountability Report Fiscal Years 2025–2028," Jeffrey R. Beckham, Office of Policy and Management, <https://portal.ct.gov/-/media/opm/budget/fiscalaccountability/opm-2024-fiscal-accountability-report-final.pdf?rev=62b1ee2e4449447aae844475a9a500c7&hash=C76D46300CDD088FFD55F6A05E6CA60C%20%20,%2052,%20>



As of FY23, Connecticut's two largest pension funds were 56 percent funded, a meaningful improvement over the 46 percent funding ratio in 2016 (see Figure VI.B).<sup>3</sup> That said, it is important to note that the state's debt-to-GDP ratio remains the third highest in the country as of 2022<sup>4</sup> and total unfunded liabilities have grown in absolute terms, though this growth can be attributed, in part, to the adoption of more conservative rate of return assumptions.

Figure VI.B: Changes in assets and actuarially estimated liabilities for the Connecticut State Employees and Teachers Retirement Systems, 2016–2023 (dollars in millions)

Retirement System	Assets		Est. Liability		Funding Ratio	
	2016	2023	2016	2023	2016	2023
State	\$11,923	\$21,847	\$32,310	\$41,981	0.37	0.52
Teachers	\$16,712	\$24,455	\$29,860	\$40,877	0.56	0.60
<b>Total</b>	<b>\$28,635</b>	<b>\$46,302</b>	<b>\$62,171</b>	<b>\$82,858</b>	<b>0.46</b>	<b>0.56</b>

*Source: CT Employees Retirement System Report of the Actuary 6/30/23, CT Teachers' Retirement System Actuarial Valuation 6/30/23*

## Bond Ratings

The progress toward fiscal sustainability has been affirmed by the major credit rating agencies. The three major credit rating agencies followed a similar pattern, downgrading Connecticut's ratings beginning in 2016 and 2017 in response to the state's sustained fiscal challenges and each upgrading the state's ratings between 2021 and 2024. Today, Connecticut is rated Aa3, AA-, and AA- by Moody's, Fitch, and S&P, respectively, leaving room for further improvement (see Figure VI.C).<sup>5</sup>

Improved credit ratings have a tangible fiscal impact, lowering the relative cost of borrowing. In Connecticut's competitive bond sale in July 2024, the state treasurer attributed \$23.4 million in reduced borrowing costs for Connecticut residents over the next ten years to improved credit ratings.<sup>6</sup> These savings would be larger if Connecticut were to achieve still higher credit ratings.

<sup>3</sup> For a complete picture of Connecticut's long-term liabilities, it is also important to consider Other Post-Employment Benefits (OPEBs), which primarily consist of covering a share of health care costs for retirees. The most recent estimate of the outstanding unfunded OPEB liability facing Connecticut is \$15.5 billion, as of June 2022. See, "State of Connecticut State Employee OPEB Plan," Governmental Accounting Standards Board, Segal, 2023, <https://osc.ct.gov/wp-content/uploads/2024/09/State-of-Connecticut-OPEB-GASB-75-for-June-30-2023-OSC.pdf>, 7. This figure also represents an overall improvement in position. In 2015, the estimated unfunded liability was \$18.9 billion. See, "State of Connecticut Other Post-Employment Benefits Program," Governmental Accounting Standards Board, Segal, 2015, <https://osc.ct.gov/empret/OPEBActuarialReports/OPEBReport2016.pdf>.

<sup>4</sup> Chris Edwards, Marc Joffe, and Krit Chanwong, "Government Debt Varies Widely by State," *CATO At Liberty*, July 19, 2024, <https://www.cato.org/blog/government-debt-varies-widely-state>.

<sup>5</sup> "Treasurer Russell Announces Successful \$450 Million General Obligation Bond Sale Following Positive Rating Outlooks from Moody's and Fitch," The Office of Treasurer Erick Russell, State of Connecticut's Treasurer's Office, 2024, [https://portal.ct.gov/ott/newsroom/news/news-releases/bondsale\\_june2024](https://portal.ct.gov/ott/newsroom/news/news-releases/bondsale_june2024).

<sup>6</sup> "Treasurer Russell Announces Competitive Bond Refunding Sale Produces Savings of \$23.4 Million over Ten Years," The Office of Treasurer Erick Russell, State of Connecticut's Treasurer's Office, 2024, <https://portal.ct.gov/ott/newsroom/news/news-releases/competitivebondsale2024>.

Figure VI.C: Connecticut general obligation (GO) bond ratings, 2004–2024

Year	Moody's	Fitch	S&P
2004	Aa3	AA	AA
2005	Aa3	AA	AA
2006	Aa3	AA	AA
2007	Aa3	AAA	AA
2008	Aa3	AA	AA
2009	Aa3	AA	AA
2010	Aa3	AA	AA
2011	Aa2	AA	AA
2012	Aa3	AA	AA
2013	Aa3	AA	AA
2014	Aa3	AA	AA
2015	Aa3	AA	AA
2016	Aa3	AA-	AA-
2017	Aa3	A+	A+
2018	A1	A+	A
2019	A1	A+	A
2020	A1	A+	A
2021	A1	AA-	A+
2022	Aa3	AA-	A+
2023	Aa3	AA-	AA-
2024	Aa3	AA-	AA-

*Source: S&P Global, Fitch, Moody's, CT School + State Finance Project*

### REDUCING AVAILABLE FUNDS FOR CURRENT NEEDS

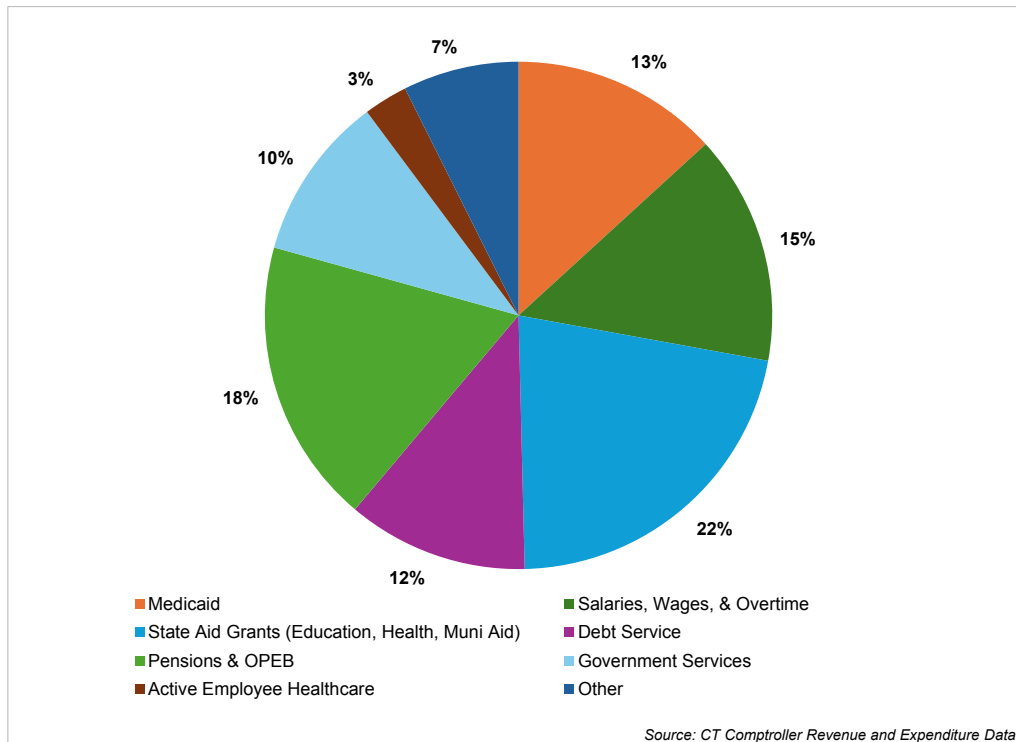
At the same time, the guardrails have constrained the state's flexibility in funding current needs and making other future-oriented investments. Over the same seven-year period examined in Figure VI.B (2016–2023), spending on priorities other than pensions has decreased both in real terms and as a share of state expenditures.<sup>7</sup>

To provide additional context, it is worth providing detail on Connecticut's expenditures, both currently and over time. The largest share of Connecticut's budget, close to a quarter of expenditures in 2023, is distributed in the form of state grants in aid and intergovernmental transfers to local governments. In the same year, 15 percent of the state's expenditures paid the salaries of current employees and 3 percent covered the costs of employee healthcare. Medicaid made up another 13 percent of state spending, and government services – a broad category that included aging and disability services, community supports and services, mental health, higher education, substance abuse, and early childhood education – made up another 10 percent of state general fund expenditures (see Figure VI.D).

<sup>7</sup> In 2016, Connecticut spent \$15.2 billion on all but pensions and OPEB, 85% of total spending in 2016, and \$2.7 billion on Pensions and OPEB. In 2023, Connecticut spent \$18.2 billion on all but pensions and OPEB, 82% of total spending in 2023, and \$4.0 billion on pensions and OPEB. When 2016 spending figures are adjusted to 2023 dollars (using the Bureau of Economic Analysis' GDP deflator), Connecticut spending on pensions and OPEB grew 20.3% from 2016 to 2023, while non-pensions and OPEB spending fell by 2.5%. See, Connecticut Comptroller Revenue and Expenditure Data; "Table 1.1.9. Implicit Price Deflators for Gross Domestic Product," U.S. Bureau of Economic Analysis, last revised on September 26, 2024, <https://www.bea.gov/itable/national-gdp-and-personal-income>.

The next largest share, approximately 30 percent of expenditures, were commitments that the state made in prior years. This spending included 12 percent for debt service and 18 percent for retiree pensions and health benefits or Other Post-Employment Benefits (OPEB) (see Figure VI.D).

Figure VI.D: Total General Fund spending in Connecticut, 2023



Note: Categories in figure developed based on Connecticut Comptroller Revenue and Expenditure Data in order to best illustrate relevant expenditures.

The composition of state spending has changed over time. For example, the relative share of funding allocated for pension payments and the retirement system has increased. In 2014, pensions and OPEB categories accounted for 14.3 percent of expenditures. In 2023, that percentage was 18 percent. Illustrated along a different timeframe, when 2016 spending figures are adjusted to 2023 dollars (using the Bureau of Economic Analysis' GDP deflator), Connecticut spending on pensions and OPEB grew 20.3 percent from 2016 to 2023, while non-pensions and OPEB spending fell by 2.5 percent.<sup>8</sup>

Moreover, since 2018, the appropriations budget has significantly understated the overall share of state funding of pensions. Incorporating annual deposits of volatile revenues, which was \$1.87 billion in FY23, spending on pensions and OPEB would account for almost a quarter (24.5 percent) of General Fund expenditures in 2023.<sup>9</sup>

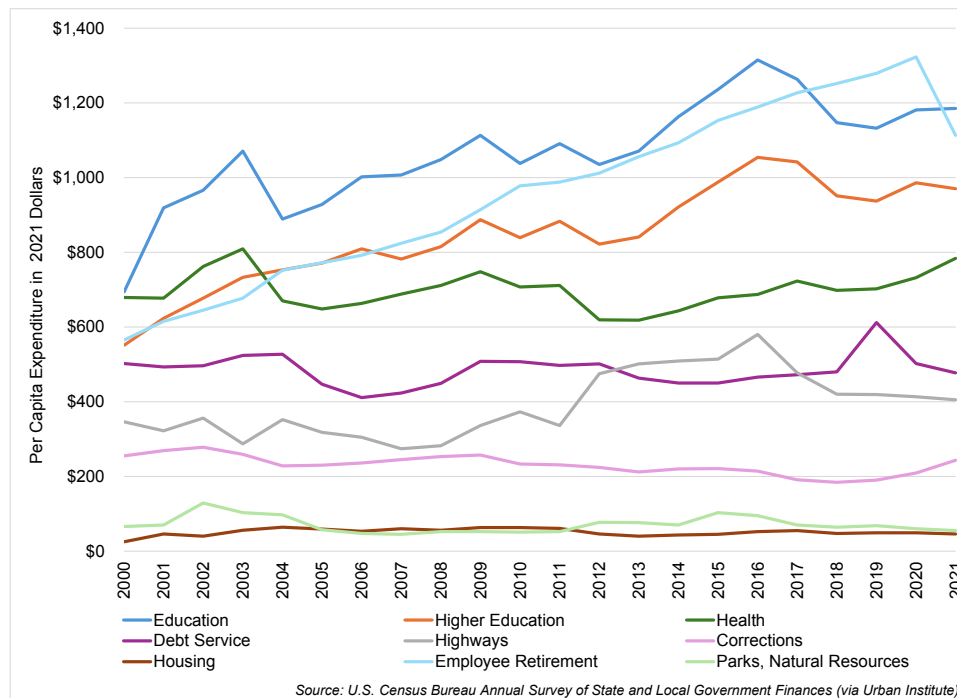
<sup>8</sup> Connecticut Comptroller Revenue and Expenditure Data; "Table 1.1.9. Implicit Price Deflators for Gross Domestic Product."

<sup>9</sup> "Fiscal Accountability Report Fiscal Years 2024–2028," Jeffrey R. Beckham, Office of Policy and Management, 2023, <https://portal.ct.gov/-/media/opm/budget/fiscalaccountability/opm-2023-fiscal-accountability-report-final.pdf>, 31–32.

Debt service also grew from 9.7 percent to 11.5 percent over the period of 2014 to 2023 as a percentage of General Fund expenditures. In contrast, the share of spending on grants to local governments and nonprofits declined from 23.4 percent to 21.8 percent, and that of salaries paid to state employees declined from 16.3 percent to 14.7 percent over the same period.<sup>10</sup>

For a more detailed breakdown of expenditure trends over time, the Bureau of the Census Annual Survey of State and Local Governments offers another look—albeit from an imperfect source, as consistent data across categories are difficult to obtain.<sup>11</sup>

Figure VI.E: Real per capita Connecticut spending on selected functions, 2000–2021



Note: Figure does not include the Public Welfare function, which includes Medicaid spending. It is also important to note that although the chart above depicts a decrease in per capita expenditure on employee retirement, this chart does not include the surplus payments captured by the volatility cap and directed into the state pension funds, and therefore understates the amount dedicated to employee retirement costs since 2018.

Over the entire period, spending on employee retirement (pensions) has grown the fastest of the categories in the figures, increasing more than 3 percent per year in real growth, even before accounting for the additional surplus payments captured by the volatility cap. The trends that can be observed in the brief post-cap window (2017 to 2021) are also notable, though certainly

10 Connecticut Comptroller Revenue and Expenditure Data.

11 Note that this data was pulled from the Urban Institute's State and Local Finance Data tool. See, "State and Local Finance Data Exploring the Census of Governments," State and Local Finance Initiative, Urban-Brookings Tax Policy Center, <https://state-local-finance-data.taxpolicycenter.org/pages.cfm>.

impacted by the infusion of COVID-related federal funds that supplemented state spending starting in 2020. Here, spending on education, higher education, highways, housing, and employee retirement (pensions) all fell in real terms, while debt service and spending on corrections and health grew.

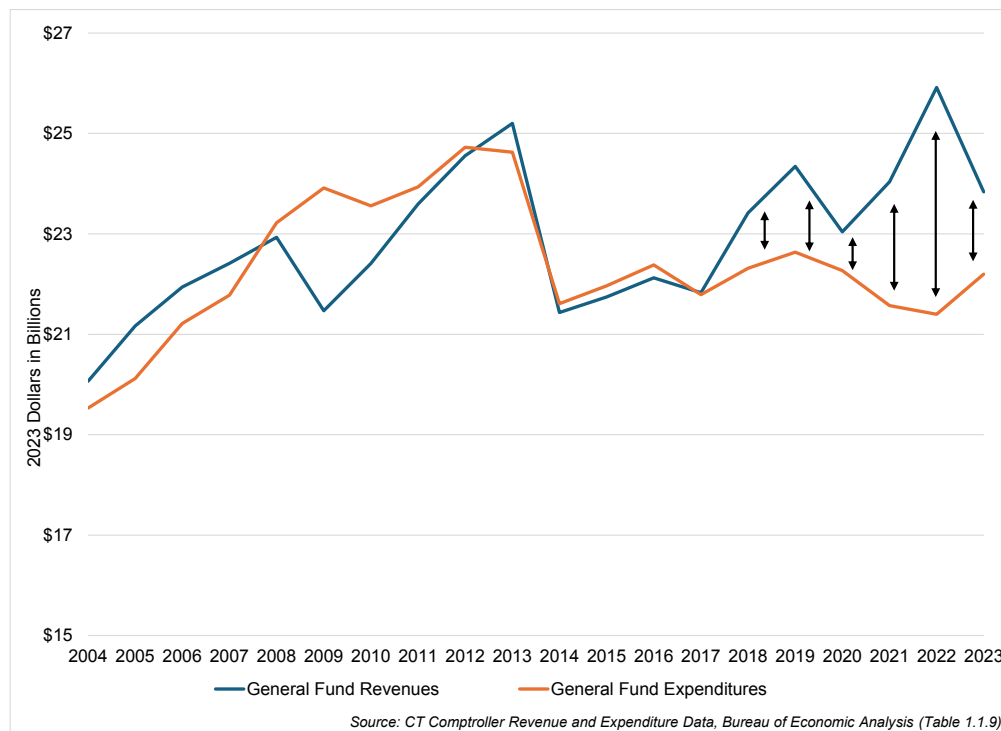
In sum, a growing portion of state spending has been used to fund fiscal decisions made in the past (debt service and pensions), leaving less available to address the problems of the present. As discussed in our “Stakes of the Debate” paper, without modification of the guardrails, Connecticut may be forced to make difficult cuts to core programs and services despite projecting sizable surpluses in the years ahead. Connecticut currently faces a gap of \$331 million to \$1.05 billion between anticipated FY26 spendable General Fund revenues and expenditures (see Figure III.A in “Stakes of the Debate”).

**THE ROLE OF THE GUARDRAILS IN CONSTRAINING SPENDING**

It is difficult to make precise spending comparisons over time due to changes in the accounting treatment of different categories. Nevertheless, it is worth trying to determine whether Connecticut’s fiscal guardrails are responsible, at least in part, for the trends in spending. To do so, we first examine differences before and after the imposition of the caps. We then investigate Connecticut’s spending compared to states in the region, where policymakers do not have to contend with such budget restrictions.

Adjusting for inflation, we compare revenues and expenditures over a twenty-year period (see Figure VI.F).

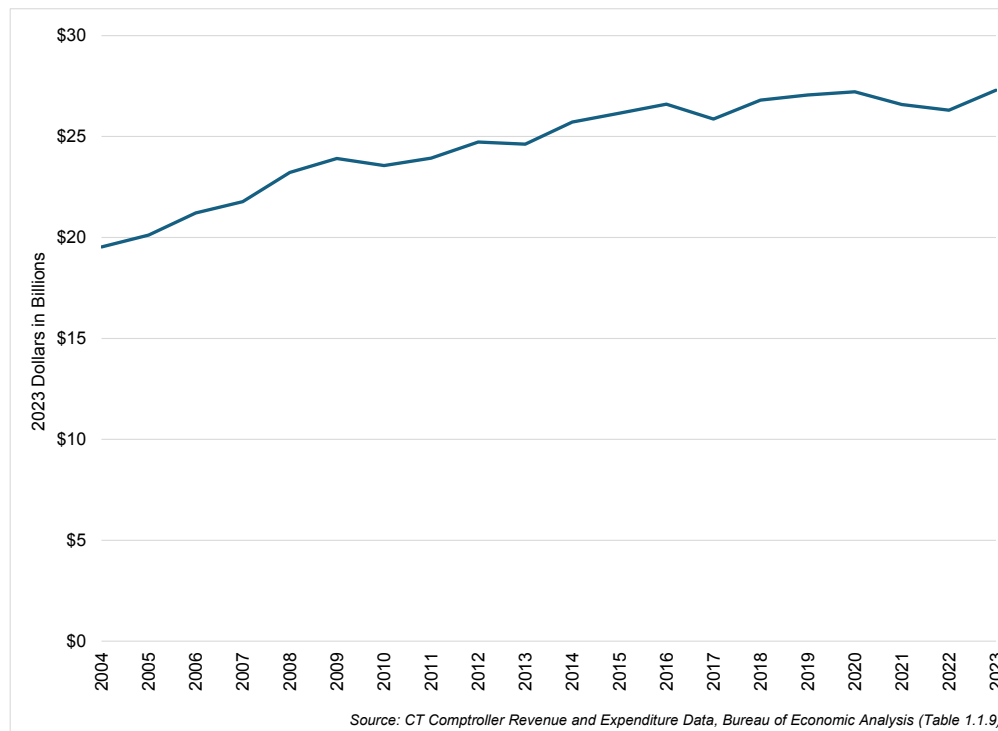
Figure VI.F: Connecticut General Fund real revenues and expenditures, 2004–2023



This simple look at state revenues and expenditures in 2023 dollars shows the change in state spending behavior in 2018 and on with the implementation of the guardrails.

We then compare the rate of growth in total spending 14 years before the start of the revenue and volatility caps (2004–2017) against the period following their implementation (2018–2023).

Figure VI.G: Connecticut General Fund real expenditures, 2004–2023



Note: Starting in 2014, federal matching dollars to state expenditures on Medicaid were excluded from total reported state spending figures.<sup>12</sup> In order to display spending consistently over time, expenditures have been adjusted to include that matching spending from 2014 on. From 2014 to 2023, we calculate federal matching spending by applying the federal proportion of “Total Net Expenditures” to Connecticut’s state Medicaid spending, as reported by Centers for Medicare and Medicaid Services.<sup>13</sup>

With the spending cap present but not the volatility or revenue caps, real total expenditures (including the federal share of Medicaid spending, which is estimated in 2014 and after) grew at an annual rate of 1.33 percent from 2012 to 2017.<sup>14</sup> In contrast, from 2018 to 2023, with the revenue cap, the volatility cap, and an intact spending cap, total expenditures grew at an

<sup>12</sup> “Connecticut State Budget FY 14 & FY 15 Budget,” Office of Fiscal Analysis, [https://www.cga.ct.gov/ofa/Documents/year/BB/2014BB-20130926\\_FY%2014%20and%20FY%2015%20Connecticut%20Budget.pdf](https://www.cga.ct.gov/ofa/Documents/year/BB/2014BB-20130926_FY%2014%20and%20FY%2015%20Connecticut%20Budget.pdf), 5.

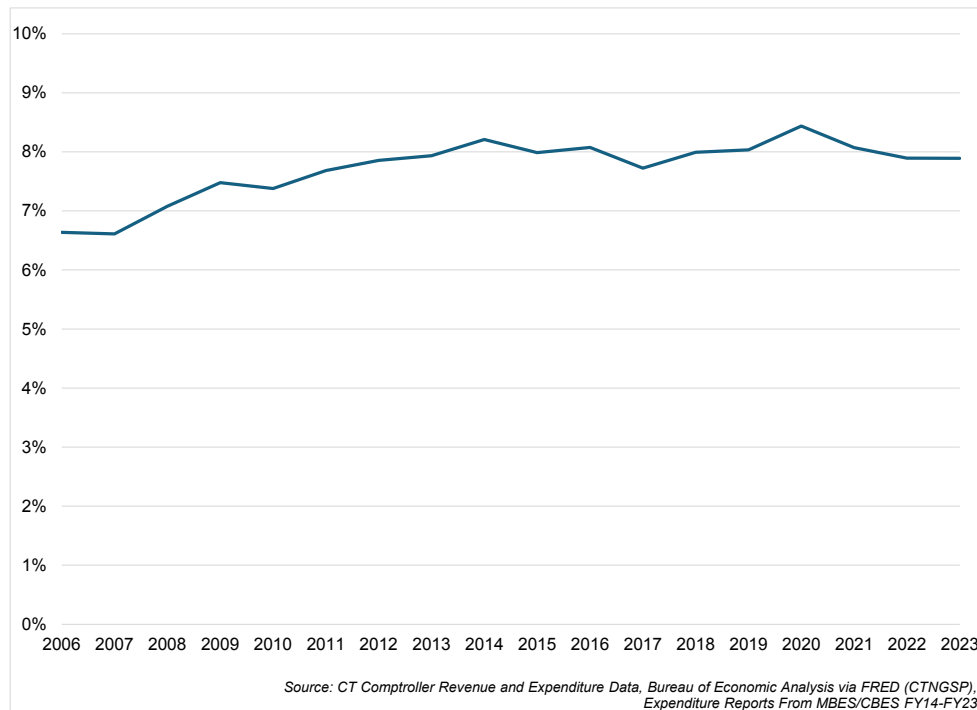
<sup>13</sup> “Expenditure Reports from MBES/CBES,” Centers for Medicare & Medicaid Services, <https://www.medicare.gov/medicaid/financial-management/state-expenditure-reporting-for-medicaid-chip/expenditure-reports-mbescbes/index.html>.

<sup>14</sup> In order to maintain a consistent, six-year comparison in the before and after periods, we use 2012–2017 and 2018–2023 as our comparison periods. If we compare all years in the chart before 2018 (2004–2017) to 2018–2023, the valence of the conclusion remains: spending grew at an annual rate of 2.22% from 2004–2017, meaning average annual growth 2018–2023 was less than half of growth from 2004–2017.

average annual rate of 0.92 percent, or less than three-quarters the speed of the prior period. It is worth noting that, during the latter part of this period, COVID-19 federal relief funds allowed the state to devote additional resources to current programs and services without relying on state funds.

To determine whether the slower rate of spending is merely a function of the rate of economic growth, we examine the trend in spending as a share of state GDP.

Figure VI.H: Connecticut General Fund spending as a percentage of GDP, 2006–2023



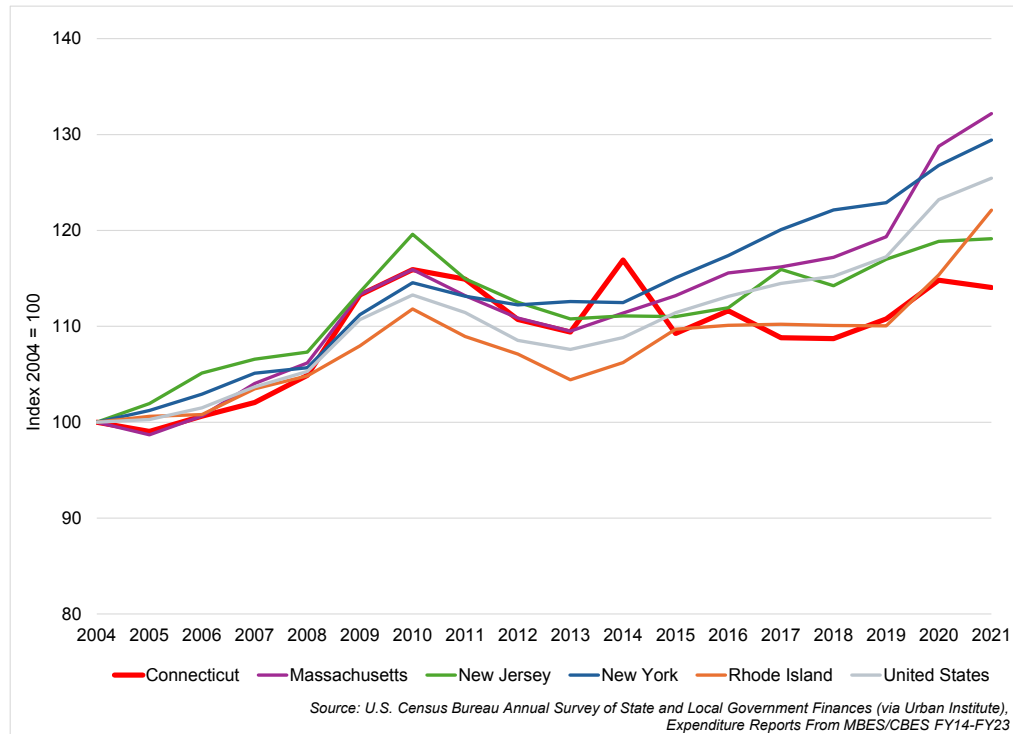
Here we see a relatively stable relationship with General Fund spending hovering between 6.6 percent and 8.4 percent of state GDP. There does appear to be a local peak of almost 8.4 percent in 2020 before decreasing in subsequent years to approximately 7.9 percent.

Another way to explore the impact of the caps is to examine Connecticut relative to neighboring states. Once again, it is difficult to make precise comparisons between states because of differences in how budgets are structured and how responsibilities are allocated between state and local governments. As a consequence, to draw a more meaningful comparison, we examine total state and local spending. Figure VI.I draws upon the Bureau of the Census Annual Survey of State and Local Government series to compare state and local spending in Connecticut relative to neighboring states as well as the U.S. as a whole.<sup>15</sup>

<sup>15</sup> Note that this data was pulled from the Urban Institute's State and Local Finance Data tool. See, "State and Local Finance Data Exploring the Census of Governments," State and Local Finance Initiative, Urban-Brookings Tax Policy Center, <https://state-local-finance-data.taxpolicycenter.org/pages.cfm>.

Some adjustments are made to ensure that the comparison is meaningful. The calculation starts with total current expenditures (excluding such things as capital accounts), adjusts for population size and inflation, and indexes the dollars to 2004.

Figure VI.I: Real per capita state and local expenditure growth in Connecticut and other states, 2004–2021



Note: Starting in 2014, federal matching dollars to state expenditures on Medicaid were excluded from total reported state spending figures.<sup>16</sup> In order to display spending consistently over time, expenditures have been adjusted to include that matching spending from 2014 on. From 2014 to 2023, we calculate federal matching spending by applying the federal proportion of “Total Net Expenditures” to Connecticut’s state Medicaid spending, as reported by Centers for Medicare and Medicaid Services.<sup>17</sup>

Using this measure, state and local spending in Connecticut roughly kept pace with the group prior to 2014, the period leading up to the point at which the federal share of Medicaid was removed from the reporting and before the imposition of the other guardrails in 2017.<sup>18</sup> Total inflation-adjusted expenditures per capita have grown extremely slowly in Connecticut from 2015 to 2021 (an average of 0.74 percent annually in real terms). By contrast, state spending in New Jersey grew at 1.20 percent annually and the other states grew at a rate at least twice that of Connecticut. The national average growth rate was 2.01 percent over the period, with Massachusetts demonstrating an average annual rate of growth of 2.65 percent.

<sup>16</sup> “Connecticut State Budget FY 14 & FY 15 Budget,” 5.

<sup>17</sup> “Expenditure Reports from MBES/CBES.”

<sup>18</sup> “Connecticut State Budget FY 14 & FY 15 Budget,” 5.



Even without the indexing, Connecticut lags behind the comparison group. In 2021, the most recent year with comparable data, total state and local expenditures per capita in Connecticut were \$12,347. That figure was roughly in line with the U.S per capita spending in 2021 (\$12,276) despite Connecticut's rank of third wealthiest state in the country, as measured by personal income per capita, behind the District of Columbia and Massachusetts.<sup>19</sup> Connecticut's 2021 total state and local expenditures per capita also lagged well below the comparison states listed, which ranged roughly from \$13,000 to \$19,000 per capita.

These comparisons do not establish a causal link between the guardrails and state spending. A number of different factors contribute to the creation of a state budget. For example, Connecticut has recently had slow GDP growth – though it remains one of the richest states in country. At a minimum, however, the comparisons demonstrate that spending in Connecticut has grown at a far slower pace relative to neighboring states and that there is an observable difference in the pace of growth in spending before and after imposition of the caps.

## CONCLUSION

It is impossible to say, with certainty, what Connecticut's fiscal picture would look like in the absence of the guardrails. After a long period of economic stagnation, Connecticut's revenue growth increased beginning in 2018. The adoption of the fiscal guardrails compelled policy-makers to use much of that additional revenue to make substantial contributions to the Budget Reserve Fund and substantial supplemental payments into state pension funds. Over the past seven years, those contributions have brought the Budget Reserve Fund to the statutory maximum of 18 percent of budget and have resulted in \$8.6 billion in additional payments to the pension funds. Ratings agencies have improved their outlook.

At the same time, it is important to recognize that Connecticut's spending on many priorities other than pensions has decreased in recent years, and spending on current needs and other future-focused priorities has begun to lag peer states. Even prior to the imposition of the guardrails, the composition of state spending has shifted, with a greater share going to fund commitments from prior years. To the extent that the fiscal guardrails extend these trends, Connecticut may find itself falling behind in the provision of current services or growth-promoting investments, relative to peer states.

<sup>19</sup> "SAINC1 State annual personal income summary: personal income, population, per capita personal income," U.S. Bureau of Economic Analysis, last revised on September 27, 2024, <https://www.bea.gov/data/gdp/gdp-state>.