

# CBO's Use of GitHub

December 19, 2023

Presentation to the  
Congressional Data Task Force

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**CBO prioritizes  
objectivity,  
analytical soundness,  
responsiveness,  
transparency, and  
accessibility.**

# CBO's Transparency Efforts

- Testifying and publishing answers to questions
- Explaining analytic methods
- **Releasing data and computer code**
- Analyzing the accuracy of its estimates
- Comparing current estimates with previous estimates
- Comparing its estimates with those of other organizations
- Estimating the effects of policy alternatives
- Characterizing the uncertainty of estimates
- Creating data visualizations

# Guidance in CBO's Administrative Manual on Posting Code

## Section 7.17. Posting CBO Code

To promote transparency, Division Directors are encouraged to post data, computer code, and documentation associated with models and projects on CBO's GitHub page (<https://github.com/us-cbo>) to the extent practicable. When a Division Director has determined that there is value in releasing code, they should contact the Research Director for a code review to test for replicability of results and to ensure that no sensitive information is released. To maximize the quality of the underlying analyses that support CBO's written work and to help the release process go smoothly, employees should strive to follow CBO's Coding Conventions and should refer to CBO's Code Review Checklist before submitting their code for review.

## CBO's GitHub Page

CBO created a [page on GitHub](#)—a platform for storing and sharing code—in May 2020.

Before then, code for select projects was released on CBO's website.

There are currently four repositories on CBO's GitHub page:

- `eval-projections`
- `captax`
- `means_tested_transfers_imputations`
- `debtwelfare`

The README.md file in each repository provides a detailed overview of the project and how to replicate CBO's results.



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# Congressional Budget Office

Nonpartisan Analysis for the U.S. Congress

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Overview **Repositories 4** Packages People

### Popular repositories

<b>means_tested_transfer_imputations</b> (Public) Stata 11 stars 4 forks	<b>captax</b> (Public) Python 7 stars 6 forks
<b>debtwelfare</b> (Public) Python 2 stars	<b>eval-projections</b> (Public) Python 1 star

### People

This organization has no public members. You must be a member to see who's a part of this organization.

### Top languages

Python Stata

# eval-projections

- **Project:** Evaluating CBO's projections of components of the federal budget
- **Summary:** Code that replicates CBO's analysis of its projection errors, which can be found in the following four publications:
  - [\*The Accuracy of CBO's Budget Projections for Fiscal Year 2023\*](#)
  - [\*An Evaluation of CBO's Projections of Outlays From 1984 to 2021\*](#)
  - [\*An Evaluation of CBO's Past Revenue Projections\*](#)
  - [\*An Evaluation of CBO's Past Deficit and Debt Projections\*](#)
- **Programming language:** Python
- **Data:** CBO's baseline projections going back to the mid-1980s
- **Updates:** When CBO releases a new baseline or evaluation report

# captax

- **Project:** CBO's CapTax model
- **Summary:** A large-scale model that produces CBO's estimates of effective marginal tax rates on capital from new investments; those estimated tax rates are included in CBO's data on [tax parameters and effective marginal tax rates](#) in each baseline
- **Programming language:** Python
- **Data:** Extensive collection of comma-separated values (\*.csv) files containing model parameters
- **Updates:** When new baseline data become available



## means\_tested\_transfers\_imputations

- **Project:** CBO's adjustments for survey underreporting of receipt and income from selected means-tested transfer programs
- **Summary:** Code to replicate CBO's adjustments that correct for the undercount of receipt of selected means-tested transfer benefits in the Annual Social and Economic Supplement (ASEC) of the Census Bureau's Current Population Survey; those adjustments are used in the analyses underlying CBO's [\*Distribution of Household Income\*](#) reports
- **Programming language:** Stata
- **Data:** ASEC extracts from 1980 to 2022
- **Updates:** When new ASEC data files become available

# debtwelfare

- **Project:** CBO's December 2022 working paper [\*The Welfare Effects of Debt: Crowding Out and Risk Shifting\*](#)
- **Summary:** An overlapping generations (OLG) model with simulations that include the decomposition of the effects of government debt on welfare into the crowding out of capital and the shifting of risk from current to future generations
- **Programming language:** Python
- **Data:** Model parameters and calibration targets
- **Updates:** No regular updates currently planned