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TESTIMONY

The Accuracy of CBO's Recent Baseline Projections

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Chairman Arrington, Ranking Member Boyle, and Members of the Committee, thank you for inviting me to testify about the work of the Congressional Budget Office. You asked specifically about the accuracy of our projection of the deficit, so I will focus these remarks on that topic, and then I look forward to answering questions you may have on that topic and any others.

Each winter, we issue a report about the accuracy of our budget projections for the most recent fiscal year compared with the estimates we made before that year began.[1] In that analysis, we remove the effects of legislation enacted during the year and make other adjustments to focus on how accurate the projections were.[2] Compared with our projections for 2023 made in May 2022 (after those adjustments), actual outlays were underestimated by $564 billion (9 percent), and revenues were overestimated by $477 billion (11 percent).

Our underestimate of the 2023 deficit in May 2022 was unusually large, equaling 3.9 percent of gross domestic product (GDP). From 1985 to 2022, for the first fiscal year in our projections, our average absolute error (that is, the average of the errors without regard to whether they are overestimates or underestimates) was 1.1 percent of GDP.[3] During that period, we overestimated the deficit two-thirds of the time, and we underestimated it one-third of the time, as we did last year.

Accuracy for Fiscal Year 2023

The largest factors affecting the accuracy of our projections of outlays and revenues for 2023 were actions by the Administration that occurred after the projections were made (see Figure 1). In general, after a law is enacted and incorporated into our baseline, we do not predict that any other policy changes will occur. When an agency publishes a proposed regulation in the *Federal Register*, we incorporate a probability (often 50 percent) into the baseline that the rule will be implemented. That probability reflects the uncertainty about whether and how the rule ultimately will be carried out. In each baseline update, we account for newly finalized regulations and other administrative actions that are substantively different from what was previously expected.[4]

The next largest factors affecting the accuracy of our projections of outlays and revenues were underlying economic projections. Like all forecasters, we face inherent difficulties in predicting interest rates, inflation, and other economic variables.[5] In addition, to provide a basis for the production of budget projections, our economic projections are generally finalized about two months before our budget projections are published. At the time they are finalized, our forecasts are typically similar to those of other forecasters. When economic conditions are changing rapidly, as they were in the spring of 2022, that difference in timing can contribute to inaccuracy.

For outlays, four factors account for about five-sixths of the total underestimate:

- **Administrative actions affecting student loans and deposit insurance.** Roughly $125 billion of the total underestimate was the result of costs recorded by the Department of Education for modifications it made to the terms of outstanding student loans after we completed our May 2022 projections. The largest modifications were substantial changes to income-driven repayment plans and an extended pause in loan repayment and interest accrual.[6] And roughly $60 billion of the total underestimate stemmed from unusual outlays for the Federal Deposit Insurance Corporation (FDIC) to facilitate the resolution of four bank failures that occurred during fiscal year

1. For that series of reports, see Congressional Budget Office, "Major Recurring Reports, Accuracy of CBO's Baseline Projections," www.cbo.gov/about/products/major-recurring-reports#22.

2. Because of their unusual size and nature, the estimated budgetary effects of the Supreme Court's June 2023 decision prohibiting the Administration's planned cancellation of outstanding student loans for many borrowers were excluded from the analysis presented in this testimony. For details, see Congressional Budget Office, *The Accuracy of CBO's Budget Projections for Fiscal Year 2023* (December 2023), Box 1, www.cbo.gov/publication/59682.

3. For reports about the accuracy of CBO's projections of outlays, revenues, deficits, and debt, see Congressional Budget Office, "Accuracy of Projections," www.cbo.gov/topics/budget/accuracy-projections. Up-to-date data on the history of those projections and actual outcomes are available on GitHub (https://github.com/US-CBO/eval-projections).

4. See Congressional Budget Office, *CBO Explains How It Develops the Budget Baseline* (April 2023), www.cbo.gov/publication/58916.

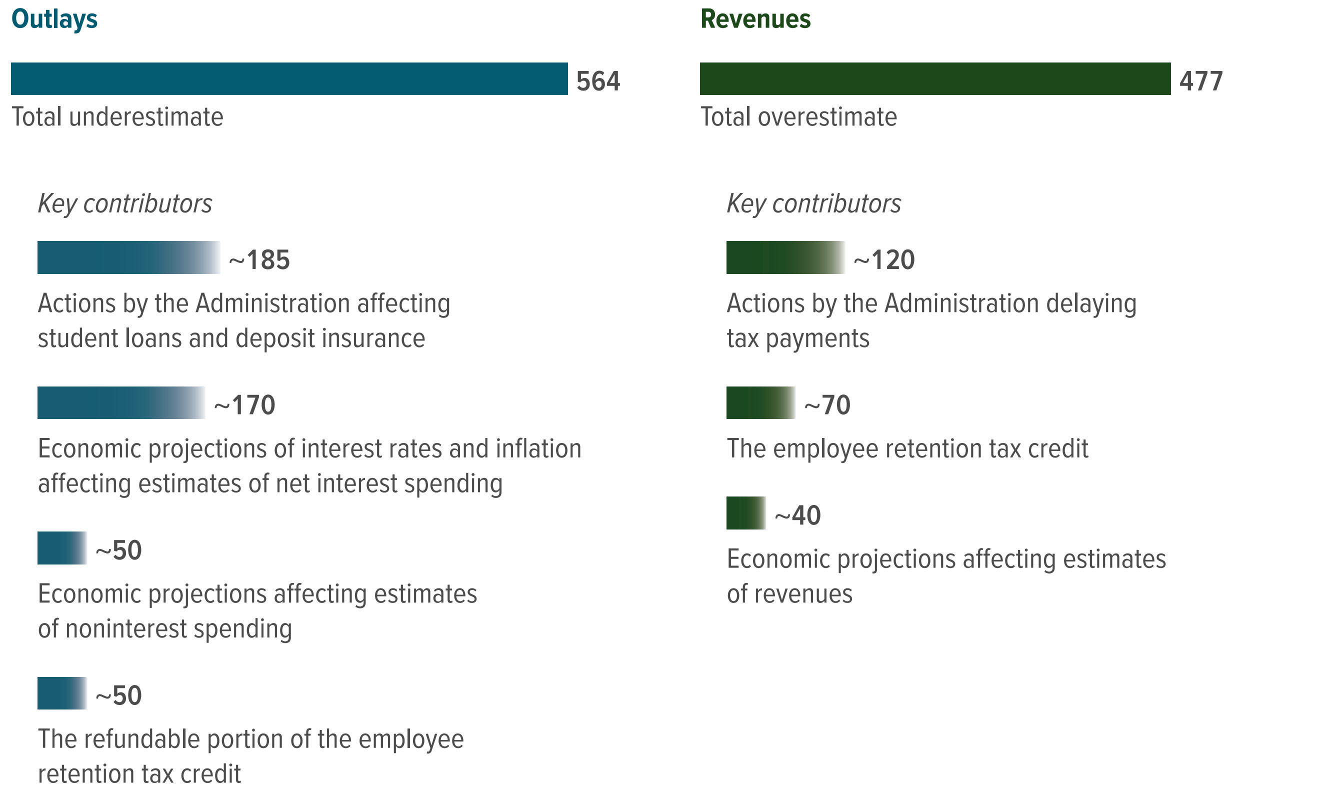
5. For a series of reports on the accuracy of CBO's economic forecasts, see Congressional Budget Office, "Major Recurring Reports, Economic Forecasting Record," www.cbo.gov/about/products/major-recurring-reports#7.

6. For information about the changes to income-driven repayment plans at the time they were proposed, see Congressional Budget Office, letter to the Honorable Virginia Foxx and the Honorable William Cassidy, M.D., regarding costs of the proposed income-driven repayment plan for student loans (March 13, 2023), www.cbo.gov/publication/58983.

Figure 1.

Currently Identified Key Factors Accounting for CBO's Underestimate of the 2023 Deficit

Billions of dollars



Data source: Congressional Budget Office. See www.cbo.gov/publication/59905#data.

~ = A rough approximation.

2023.[7] Those outlays resulted from a note issued by the FDIC to the Federal Financing Bank in exchange for cash flows from a purchase money note issued to the FDIC receivership by J.P. Morgan Chase Bank and from the FDIC's decision to insure deposits above the statutory limit of $250,000.[8]

These administrative actions by the Department of Education and the FDIC account for roughly one-third of the underestimate of outlays.

- **Economic projections affecting estimates of net interest spending.** Roughly $170 billion of the total underestimate resulted from the effects of economic projections on our estimates of net interest spending. Interest rates in 2023 were higher than we anticipated in March 2022, when we finalized the economic forecast underlying our May 2022 baseline budget projections. Specifically, we anticipated that in 2023, the interest rate on 3-month Treasury bills would

7. For information about the topic when the first payments by the FDIC occurred, see Congressional Budget Office, *Monthly Budget Review: March 2023* (April 2023), www.cbo.gov/publication/58995.

8. In addition to the unusual outlays for its administrative actions, the FDIC spent $40 billion more than we projected it would in May 2022 related to its typical role in resolving bank failures. For some baseline projections, including those for deposit insurance, we incorporate a probability that outlays related to typical but uncertain activities will occur. Thus, the baseline projection includes our estimate of the average amount of outlays over time in the future and is updated with actual amounts as they occur. However, in years that significant bank failures occur, as they did in 2023, the FDIC's actual outlays will substantially exceed the amount in the baseline. For further discussion of how we incorporate probability into our estimates, see Congressional Budget Office, *Estimating the Cost of One-Sided Bets: How CBO Analyzes the Effects of Spending Triggers* (October 2020), www.cbo.gov/publication/56698.

average 1.8 percent and that the interest rate on 10-year Treasury notes would average 2.8 percent; those rates actually averaged 4.8 percent and 3.8 percent, respectively. Compared with the forecasts in the May 2022 *Survey of Professional Forecasters*, ours were at the lower end of the middle two-thirds range. Between the time the economic projections were finalized in March and the time our budget and economic projections were published in May, many forecasts of interest rates had moved up—although almost no forecasters predicted that rates would be as high as they turned out to be (see Figure 2, left column). In addition, inflation in 2023 was also higher than we anticipated when our forecast was finalized in March 2022, causing underestimates of spending on Treasury securities indexed to inflation. Altogether, economic projections affecting net interest spending account for roughly 30 percent of the underestimate of outlays.

- **Economic projections affecting estimates of noninterest spending.** Roughly $50 billion of the total underestimate resulted from the effects of economic projections on estimates of noninterest spending. Estimates for many categories of spending were slightly lower than actual amounts, as exemplified by our $28 billion underestimate of Social Security spending: Social Security provides annual cost-of-living adjustments (COLAs) based on changes in the consumer price index for urban wage earners and clerical workers (CPI-W).[9] The primary reason for the underestimate was that inflation in 2022 as measured by the CPI-W—and thus the COLA for 2023—was greater than we had forecast. Altogether, economic projections affecting estimates of noninterest spending account for roughly 10 percent of the underestimate of outlays.
- **The employee retention tax credit (ERTC).** Roughly $50 billion of the total underestimate of outlays resulted from the effects of the ERTC. This provision affects outlays because the credit is refundable, as well as revenues. The credit applies to certain wages paid in 2020 and 2021 by employers that were subject to a governmental order restricting their business operations or that experienced a significant decline in revenues during the coronavirus pandemic. When the laws establishing and modifying the credit were enacted, the staff of the Joint Committee on Taxation (JCT) estimated that the ERTC would have budgetary effects in fiscal years 2020 through 2022 but no effect in 2023. Correspondingly, in the May 2022 baseline, we also projected that the budgetary effects would end in 2022. In 2023, however, those effects continued.[10] The misestimate of the ERTC's effects accounts for roughly 10 percent of the underestimate of outlays.[11]

Other developments that are difficult to predict also affected the accuracy of CBO's outlay projections. For example, receipts from an auction by the Federal Communications Commission of licenses for commercial use of the electromagnetic spectrum (which are recorded in the budget as reductions in mandatory outlays) came in sooner than expected—in 2022 rather than 2023. And some outlays from the Pension Benefit Guaranty Corporation's special financial assistance program for financially troubled multiemployer pension plans were made later than CBO anticipated—in 2023 rather than in 2022.

For revenues, the decline from the previous year was unusually large. The specific factors contributing to the overestimate of revenues will be better understood as more detailed tax information becomes available over the next two years. At this point, we have identified three factors that probably account for about half of the overestimate:

- **Administrative actions delaying tax payments.** Roughly $120 billion of the total overestimate resulted from administrative actions. The Internal Revenue Service (IRS) postponed deadlines for payments that typically would have been due throughout fiscal year 2023 until 2024 for taxpayers affected by natural disasters, including most taxpayers in California.[12] Additionally, the IRS granted relief from penalties arising from the new alternative minimum tax for corporations until

9. In our projections, the CPI-W grew at the same rate as the measure shown in Figure 2, the consumer price index for all urban consumers (CPI-U).

10. For initial discussion of the ERTC's effects on outlays, see Congressional Budget Office, *Monthly Budget Review: December 2022* (January 2023), www.cbo.gov/publication/58862.

11. For additional discussion, see Congressional Budget Office, *The Accuracy of CBO's Budget Projections for Fiscal Year 2023* (December 2023), Box 2, www.cbo.gov/publication/59682.

12. For initial discussion of the postponed deadline's effects, see Congressional Budget Office, *Monthly Budget Review: September 2023* (October 2023), www.cbo.gov/publication/59544.

the agency finalized the necessary guidelines and regulations, effectively allowing businesses a longer period to make initial payments. We now estimate that some collections that would have occurred in fiscal year 2023 have been pushed into fiscal year 2024. Administrative actions account for roughly 25 percent of the overestimate of revenues.

- **The employee retention tax credit.** Roughly $70 billion of the total overestimate resulted from the ERTC's effects on revenues. The fact that those effects extended into 2023 resulted in an unanticipated reduction in income tax receipts that year in addition to the effects on outlays discussed earlier.[13] This factor accounts for roughly 15 percent of the overestimate of revenues.
- **Economic projections affecting estimates of tax revenues.** Roughly $40 billion of the total overestimate resulted from economic projections. Taxable incomes, including wages and profits, were modestly higher than CBO projected in May 2022. But higher-than-expected short-term interest rates resulted in a steep drop in remittances from the Federal Reserve, and lower-than-expected asset values in 2022 resulted in smaller realizations of capital gains and taxable withdrawals from retirement accounts. On net, economic projections account for roughly 10 percent of the overestimate of revenues.

In February 2023, we substantially improved the accuracy of our budget projections after we (and most other forecasters) boosted our forecasts of interest rates and inflation (see Figure 2, right column).[14] In addition, accounting for administrative actions after they occurred and making other updates in February 2023 and May 2023 also improved our projections.[15]

Each month, as the fiscal year progresses, we provide an update on how outlays and revenues compare with the amounts the previous year.[16] Although we do not project budgetary outcomes month by month, we do discuss how outcomes for the current fiscal year compare with our recent projections. For example, in May 2023, we indicated that the receipts collected through April, net of refunds, were about $250 billion less than we had anticipated three months earlier.[17]

Improving Accuracy Over the Next Decade

Looking beyond fiscal year 2023, some of the projections from May 2023 will be substantially revised in the *Budget and Economic Outlook* that we will publish next week.[18] Projected deficits will be smaller primarily as a result of the Fiscal Responsibility Act of 2023 and the Further Continuing Appropriations and Other Extension Act, 2024, which reduced the growth of discretionary spending. Projected deficits will also be smaller because of greater projected wages and profits and lower projected inflation.

Partially offsetting those reductions in deficits are two key factors, similar in nature to some of the factors that affected the 2023 results: Net interest costs are projected to be greater because of higher interest rates, and some changes resulting from administrative actions and market developments will add to projected deficits. For example, we are now projecting that several developments affecting energy-related tax provisions, many of which were part of the 2022 reconciliation act, will add about $400 billion to the deficit over the 2024–2033 period. That law was enacted in August 2022, and our May 2023 baseline projections incorporated cost estimates that were prepared by JCT at the time of enactment.

The largest part of the roughly $400 billion change results from a rule proposed by the Environmental Protection Agency after those baseline projections were finalized that would change standards for vehicle emissions. The rest of the change reflects market developments that increased our projections of the rate of adoption of technologies eligible for tax credits and

13. For initial discussion of the ERTC's effects on revenues, see Congressional Budget Office, *Monthly Budget Review: August 2023* (September 2023), www.cbo.gov/publication/59474.

14. For discussion of how updates to the economic forecast affected the budget, see Congressional Budget Office, *The Budget and Economic Outlook: 2023 to 2033* (February 2023), Appendix A, www.cbo.gov/publication/58848.

15. For that series of reports, see Congressional Budget Office, "Major Recurring Reports, Budget and Economic Outlook and Updates," www.cbo.gov/about/products/major-recurring-reports#1.

16. For that series of reports, see Congressional Budget Office, "Major Recurring Reports, Monthly Budget Review," www.cbo.gov/about/products/major-recurring-reports#9.

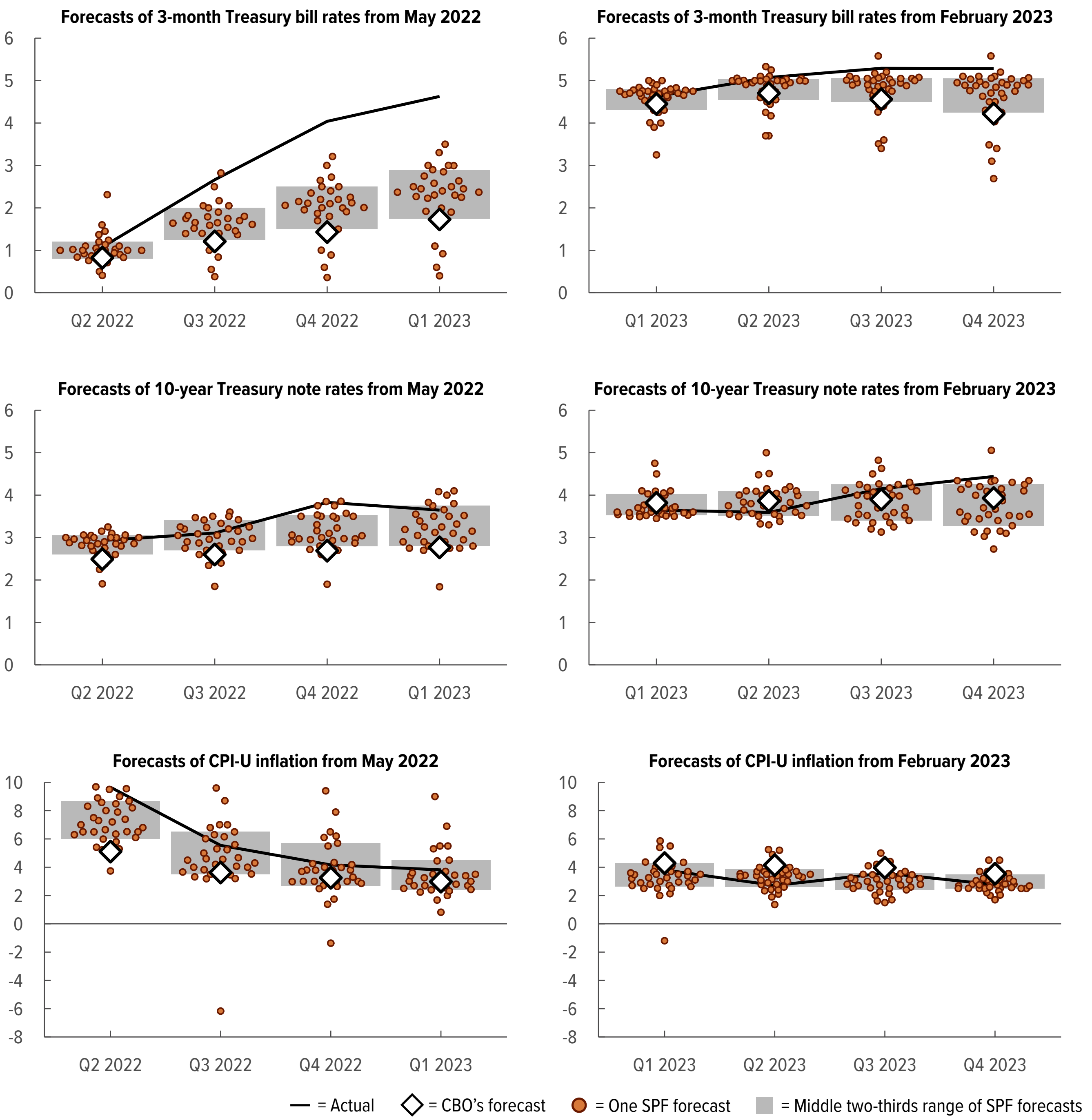
17. See Congressional Budget Office, *Monthly Budget Review: April 2023* (May 8, 2023), www.cbo.gov/publication/59053.

18. See Deborah Kilroe, "CBO to Release Budget and Economic Outlook on February 7," *CBO Blog* (January 18, 2024), www.cbo.gov/publication/59898.

Figure 2.

Forecasts From CBO and the *Survey of Professional Forecasters* Compared With Actual Outcomes

Percent



Data sources: Congressional Budget Office, forecasts published in May 2022 (finalized March 2, 2022) and in February 2023 (finalized December 6, 2022); Federal Reserve Bank of Philadelphia, *Survey of Professional Forecasters: Second Quarter 2022* (May 13, 2022), https://tinyurl.com/2p87bj3y, and *Survey of Professional Forecasters: First Quarter 2023* (February 10, 2023), https://tinyurl.com/y2xctkwk. See www.cbo.gov/publication/59905#data.

Each of the data points represents a forecast made by one of more than 30 respondents in the *Survey of Professional Forecasters*. The middle two-thirds range omits the top one-sixth and the bottom one-sixth of the forecasts.

Quarterly CPI-U inflation is measured from one quarter to the next quarter and is expressed as an annual rate.

Interest rates are quarterly averages.

CPI-U = consumer price index for all urban consumers; SPF = *Survey of Professional Forecasters*.

implementation guidance from the Treasury Department that has been more generous to taxpayers than JCT anticipated in the original estimates for the legislation; those changes are consistent with JCT's recent estimates of energy-related tax expenditures, reflecting greater use of electric vehicle tax credits than previously projected.[19] Projections about the budgetary effects of energy-related tax provisions remain highly uncertain. Many factors, including the pace of adoption and deployment of low-emissions technologies and electric vehicles, as well as future administrative actions taken by federal or state agencies, could lead to outcomes that differ from those projected.

Let me close by saying that we are continually striving to improve the analysis that we provide to you. I am happy to answer your questions.

19. See Joint Committee on Taxation, *Factors Considered When Estimating the Revenue Effects of the Energy Provisions of Public Law 117-169 and Subsequent Developments* (May 26, 2023), www.jct.gov/publications/2023/energy-estimates-for-pl-117-169 (PDF), and *Estimates of Federal Tax Expenditures for Fiscal Years 2023–2027*, JCX-59-23 (December 7, 2023), www.jct.gov/publications/2023/jcx-59-23 (PDF). For additional discussion of electric vehicle tax credits, see David Austin, *Modeling the Demand for Electric Vehicles and the Supply of Charging Stations in the United States*, Working Paper 2023-06 (Congressional Budget Office, September 2023), www.cbo.gov/publication/58964.

Nicholas Abushacra, Julia Aman, Robert Arnold, Grace Berry, Barry Blom, Aaron Feinstein, Justin Humphrey, Jeffrey Kling, Leah Koestner, Avi Lerner, Chandler Lester, Jeffrey Schafer, Joshua Shakin, Jennifer Shand, Molly Sherlock, and James Williamson conducted the analysis for this testimony with guidance from Christina Hawley Anthony, Chad Chirico, Richard DeKaser, Devrim Demirel, John McClelland, Sam Papenfuss, and Joseph Rosenberg. Leigh Angres and Joesph Kile provided comments. In keeping with the Congressional Budget Office's mandate to provide objective, impartial analysis, the testimony makes no recommendations.

Mark Doms, Mark Hadley, and Robert Sunshine reviewed the testimony. John Skeen edited it, and Casey Labrack created the figures and prepared the text for publication. The testimony is available at www.cbo.gov/publication/59905.

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