



January 30, 2024

Honorable Steve Daines
United States Senate
Washington, DC 20510

Re: Effects of No GDP Growth on Federal Deficits

Dear Senator:

At the request of you and your colleagues, the Congressional Budget Office has estimated what the effects on federal deficits would be if the economy was stagnant over two years. To do so, the agency created two scenarios with no growth of gross domestic product adjusted to remove the effects of inflation (real GDP): one scenario with increases in interest rates and inflation typical of a supply shock, such as when oil prices rise, and the other with decreases in interest rates and inflation typical of a demand shock, such as when household spending declines because consumer confidence has fallen.

Estimates

Compared with CBO's baseline projection of the deficit in its February 2023 *Budget and Economic Outlook*, the deficit increases by about \$336 billion in the supply-shock scenario and by about \$192 billion in the demand-shock scenario in total during fiscal years 2024 and 2025, the agency estimates.¹

In the supply-shock scenario, spending grows more than revenues.

- Spending grows by about \$472 billion. Higher interest rates and inflation increase net interest costs by about \$359 billion—as interest rates on 10-year Treasury notes rise from 3.9 percent in the fourth quarter of fiscal year 2023 to 6.1 percent in fourth quarter of 2025 (see Table 1 at the end of this letter). In addition, higher inflation

¹ See Congressional Budget Office, *The Budget and Economic Outlook: 2023 to 2033* (February 2023), www.cbo.gov/publication/58848.

increases mandatory spending (mostly on Social Security, Medicare, and Medicaid) by about \$113 billion.

- Revenues rise by about \$135 billion, as receipts from individual income taxes and payroll taxes increase. The increase occurs because those taxes are levied on nominal wages and salaries, which increase in this scenario as a result of higher inflation despite the lack of growth in real GDP.

In the demand-shock scenario, revenues shrink more than spending.

- Revenues are about \$317 billion less, as lower nominal wages and salaries decrease receipts from individual income taxes and payroll taxes.
- Spending is about \$125 billion less. Lower interest rates and inflation reduce net interest costs by about \$106 billion. Growth from the end of 2023 to the end of 2025 in the consumer price index for all urban consumers slows from the 2.5 percent annual rate in CBO's baseline to a 1.4 percent annual rate in the scenario. Lower inflation reduces mandatory spending by about \$19 billion.

Basis of the Estimates

Each of the two scenarios starts with the average of a thousand simulations of economic conditions that incorporate the restriction that real GDP growth is zero over two years. Those simulations are based on historical patterns of variability and correlation among real GDP growth, the federal funds rate (the rate that financial institutions charge each other for overnight loans of their monetary reserves), and growth in the personal consumption price index excluding food and energy (the core PCE price index). The scenario typical of a supply shock incorporates the restrictions that the federal funds rate increases and that core PCE price inflation increases. By contrast, the scenario typical of a demand shock incorporates the restrictions that the federal funds rate decreases and that core PCE price inflation decreases.²

CBO simulated additional economic variables, such as the consumer price index for all urban consumers and the unemployment rate, that are

² For details about the analytic method and the ways that the supply-shock and demand-shock restrictions were imposed, see Juan Antolín-Díaz, Ivan Petrella, and Juan F. Rubio-Ramírez, "Structural Scenario Analysis With SVARs," *Journal of Monetary Economics*, vol. 117 (January 2021), pp. 798–815, <https://doi.org/10.1016/j.jmoneco.2020.06.001>.

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important for estimating budgetary effects using historical correlations with real GDP growth, the federal funds rate, and core PCE inflation.³ CBO then used its incomes model to forecast income and more interest rate variables and its budgetary feedback model to estimate how revenues, mandatory spending, and net interest costs would differ from its baseline budget projections under the supply-shock and demand-shock scenarios.⁴ No changes in discretionary funding were included in the analysis because such funding depends on decisions by lawmakers.

I hope this information is useful to you. Please contact me if you have questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Phillip L. Swagel", with a long, sweeping flourish extending to the right.

Phillip L. Swagel
Director

cc: Honorable John Barrasso, Honorable Marsha Blackburn, Honorable Katie Boyd Britt, Honorable Bill Cassidy, Honorable John Cornyn, Honorable Mike Crapo, Honorable Bill Hagerty, Honorable Ron Johnson, Honorable James Lankford, Honorable Cynthia M. Lummis, Honorable John Thune, Honorable Thom Tillis, and Honorable Todd Young

³ See Byoung Hark Yoo, *Conditional Forecasting With a Bayesian Vector Autoregression*, Working Paper 2023-08 (Congressional Budget Office, November 2023), www.cbo.gov/publication/59629.

⁴ See Congressional Budget Office, “Assessing the Budgetary Implications of Economic Uncertainty With CBO’s Incomes Model and Budgetary Feedback Model” (January 2023), www.cbo.gov/publication/58885.

Table 1.
Economic Outcomes in CBO’s February 2023 Baseline and Two Scenarios

Percent			
	February 2023 baseline	Scenario typical of a supply shock and no real GDP growth	Scenario typical of a demand shock and no real GDP growth
Annualized growth from FY23:Q4 to FY25:Q4			
Real GDP	2.5	0	0
CPI-U price index	2.5	6.2	1.4
Percentage-point change from FY23:Q4 to FY25:Q4			
Interest rate on 3-month Treasury bills	-2.2	0.9	-4.2
Interest rate on 10-year Treasury notes	-0.1	2.2	-0.8
Unemployment rate	-0.2	0.3	1.3
Level in FY23:Q4			
Interest rate on 3-month Treasury bills	4.6	4.6	4.6
Interest rate on 10-year Treasury notes	3.9	3.9	3.9
Unemployment rate	4.9	4.9	4.9
Level in FY25:Q4			
Interest rate on 3-month Treasury bills	2.4	5.5	0.4
Interest rate on 10-year Treasury notes	3.8	6.1	3.1
Unemployment rate	4.7	5.2	6.2

Data source: Congressional Budget Office.

For details about CBO’s February 2023 baseline economic projections, see Congressional Budget Office, *The Budget and Economic Outlook: 2023 to 2033* (February 2023), www.cbo.gov/publication/58848.

FY23:Q4 = the fourth quarter of fiscal year 2023, which ran from July 1, 2023, to September 30, 2023;
 FY25:Q4 = the fourth quarter of fiscal year 2025, which runs from July 1, 2025, to September 30, 2025.

CPI-U = consumer price index for all urban consumers; FY = fiscal year; GDP = gross domestic product.