

The Looming Debt Spiral: Analyzing the Erosion of U.S. Fiscal Space

Paul Winfree, Ph.D. | President & CEO
Economic Policy Innovation Center
March 5, 2024

Executive Summary

- **Escalating Debt Levels:** The U.S. federal debt as a percentage of the economy has reached its highest level since World War II. This paper projects that the federal government will begin running out of fiscal space, or its capacity to take on additional debt to deal with adverse fiscal events, within the next 15 years. This is driven by unsustainable debt accumulation that will outpace economic growth.
- **Importance of Fiscal Space:** Fiscal space is crucial for the government's ability to respond to crises such as war, pandemics, and recessions. However, persistent structural deficits, rising interest costs, and slower economic growth erode fiscal capacity and threaten the nation's ability to manage future challenges without causing additional harm.
- **Policy Implications and Recommendations:** To preserve fiscal space and prevent a debt spiral, it will become necessary to implement a deficit reduction package that reduces spending, including the growth in federal health spending, while promoting economic growth. Under CBO's baseline scenario, this will require reducing the primary deficit by \$2.1 trillion over the next 10 years while offsetting any increases in the deficit that are associated with the continuation of expiring tax or spending policies.

Introduction

The federal debt as a percentage of the economy is at its highest level since World War II. At the end of 2007, the debt held by the public was \$5.1 trillion (or about 35 percent of the economy).¹ Since the beginning of the pandemic, debt held by the public has increased by \$9.1 trillion. Over the next year, about \$8.9 trillion in existing debt will mature along with \$1.5 trillion in additional deficit spending, triggering new borrowing of roughly \$10 trillion to cover primary deficits and the rolling over existing debt.²

¹ U.S. Department of Treasury, Fiscal Service, by way of FRED, <https://fred.stlouisfed.org/series/FYGFDPUN>.

² Deficit projections are from the Congressional Budget Office February 2024 Baseline Update. Estimates of new marketable debt from Apollo Global Management, "Rising U.S. Government Debt: What to Watch?" February 2024, <https://apolloacademy.com/wp-content/uploads/2024/02/OutlookForDemandForTreasuries2024-0203.pdf>.

What does this mean for the sustainability of the federal government's budget?

Having the capacity to borrow money is an essential tool in fighting wars, pandemics, recessions, and other adverse events. Therefore, the debt itself does not reflect an undesirable position. Rather, it can reflect the strength of a nation, a culture, or an economy. However, if the government exhausts the capacity to borrow it could threaten the nation's ability to combat challenges. This is why protecting the federal government's creditworthiness has been at the core of fiscal and monetary policy since the 1790s.³

One method that economists use to determine a government's borrowing capacity is by estimating the difference between existing public debt and the maximum sustainable level of debt that a government can maintain without compromising its ability to borrow money. Importantly, the rate at which the fiscal space erodes due to persistent structural deficits, higher interest rates, or slower economic growth, can also trigger a market response that will significantly limit borrowing capacity through higher interest rates.

I find that the federal government will exhaust all fiscal space by the 2050s under the fiscal projections included in the Congressional Budget Office's (CBO) February 2024 current law baseline. However, by 2035, the debt will begin to accumulate at a quick enough rate that a growing economy will not be able to keep pace with the accumulation of new debt. If the U.S. Congress chooses to continue the current fiscal policy, rather than to allow current tax and spending provisions to expire without offsets, this process will begin in 2032.

Overview of Fiscal Space

That exigencies are to be expected to occur, in the affairs of nations, in which there will be a necessity for borrowing. That loans in times of public danger, especially from foreign war, are found an indispensable resource, even to the wealthiest of them.

Alexander Hamilton, Report on Public Credit, 1790

The creditworthiness of a nation is essential to its sustainability. This principle has remained central to the financial position of the United States government since its founding. As the government's fiscal and monetary policy has evolved, as well as the economic position of the U.S. within a global economy, the factors that affect its ability to attract investment and manage debt have changed as well. However, the idea remains the same: having the capacity to borrow money in times of extraordinary need is essential to the very existence of a nation.

³ William W. Beach, "The Crisis in Financial Governance," The Economic Policy Innovation Center, September 13, 2023, <https://epicforamerica.org/publications/the-crisis-in-financial-governance/>.

Related to this point is that the U.S. has benefited enormously from the position of having Treasury bonds serve as the principal risk-free asset in the world. In this capacity, Treasuries store value and serve an essential role in both domestic and international transactions. This means that, in times of crises, the demand for Treasuries increases which makes them more valuable. However, this standing is jeopardized by fiscal imbalance and slow economic growth. Guaranteeing that Treasuries continue to serve in this role as the world's premier risk-free asset has economic benefits for American citizens during periods of both economic growth and recessions.

One way to estimate the potential borrowing capacity of a nation is through a measure called fiscal space. Estimates of fiscal space can provide a way for policymakers to gauge the amount of public debt (as a percentage of the economy) that a nation can accumulate without being limited by market access. In a basic sense, it is the nation's credit limit.

A nation's fiscal space is influenced by its institutional stability, fiscal record, economic growth potential, fiscal commitments (*e.g.*, spending and revenue projections), trade openness, interest rates on safe and other assets, and adverse fiscal events. Typically, estimates of fiscal space assume that policymakers will react to changes in the public debt and other influencing factors.⁴ These reactions may also differ depending on the level of debt.⁵

Studies have indicated that the amount of fiscal space typically increases as the economy grows and as a nation maintains a sound fiscal record.⁶ Fiscal space typically decreases as interest rates on government debt increase; it also decreases as the size of adverse fiscal events become larger.⁷

Before the COVID-19 pandemic, many countries experienced an increase in fiscal space. This included the United States, where the OECD estimated that fiscal space increased because of very low real interest rates. However, this increase was offset by additional debt burden and lower potential economic growth.

Interest rates and potential growth are the most important factors driving fiscal space. However, increasing debt brought on by fiscal imbalance (*i.e.*, when spending growth exceeds revenue growth) increases risks associated with financial stability. This can affect interest rates for safe assets, including Treasuries. Furthermore, this imbalance will erode existing fiscal space. At some point, this rate of erosion could become so significant that the rate of potential growth cannot keep pace with growing debt. If this

⁴ Atish R. Ghosh, Jun I. Kim, Enrique G. Mendoza, Johnathan D. Ostry, and Mahvash S. Qureshi. 2013. "Fiscal Fatigue, Fiscal Space and Debt Sustainability in Advanced Economies," *Economic Journal*, vol 123 (no. 566), pp. 4-30.

⁵ Jean-Marc Fournier and Falilou Fall. 2017. "Limits to Government Debt Sustainability in OECD Countries," *Economic Modeling*, vol. 66, pp. 30-41.

⁶ Fournier and Fall (2017). The fiscal record is derived as the average primary deficit over time assuming no existing debt.

⁷ Fournier and Fall (2017) find that fiscal space evaporates very quickly as the real risk-free interest rate (*e.g.*, the difference between the inflation rate and the yield on Treasuries) increases above 1.6 percent.

happens, interest rates will increase, and debt will grow exponentially as a percentage of the economy thus triggering a debt spiral.

Estimates of Fiscal Space

In a paper published last year, I found that the erosion in the U.S. federal government's fiscal space over the next 30 years was driven by increasingly higher interest costs and excessive spending on federal health programs.⁸ This has not changed based on new data from CBO's long-term baseline.⁹ The main differences in CBO's projections are that health spending is even higher, but revenues are also higher and overall spending is lower (see Figure A1 in the appendix). Higher projected revenues and lower spending are driven by (a) a larger economy associated with higher levels of migration, and (b) unrealistic assumptions about the sustainability of the discretionary spending limits imposed by the Fiscal Responsibility Act of 2023.¹⁰

Figure 1 shows the comparison of projected fiscal space in February 2024 relative to this time last year under the CBO long-term baseline. This analysis uses the same method of calculating fiscal space as Winfree (2023) which is based on methods used by Ghosh et al. (2013) and explained in Botev et al. (2016).¹¹ In the short-term, there is marginally less fiscal space but there is additional fiscal space over the entire period from 2024 to 2053 compared to last year. This is consistent with CBO's baseline revisions summarized in the last paragraph.

These estimates are sensitive to a number of factors including that CBO is required to project spending and revenues under "current law." However, current law assumes that many unpopular policies will phase in (*e.g.*, pharmaceutical price controls) and popular policies will phase out (*e.g.*, marginal tax rate cuts). Figure 2 shows the difference between current law (*i.e.*, what would happen if the law were to remain unchanged and program sunsets remain in place) and current policy (*i.e.*, what would happen if fiscal policy remained relatively unchanged compared to the time of publication of this paper).¹² I find that maintaining current policy would erode fiscal space about two years earlier than under current law.

⁸ Paul Winfree, "The Contribution of Federal Health Programs to U.S. Fiscal Challenges and the Need for Reform," Paragon Health Institute, January 2023, <https://paragoninstitute.org/wp-content/uploads/2023/01/fiscal-sustainability-of-health-programs.pdf>.

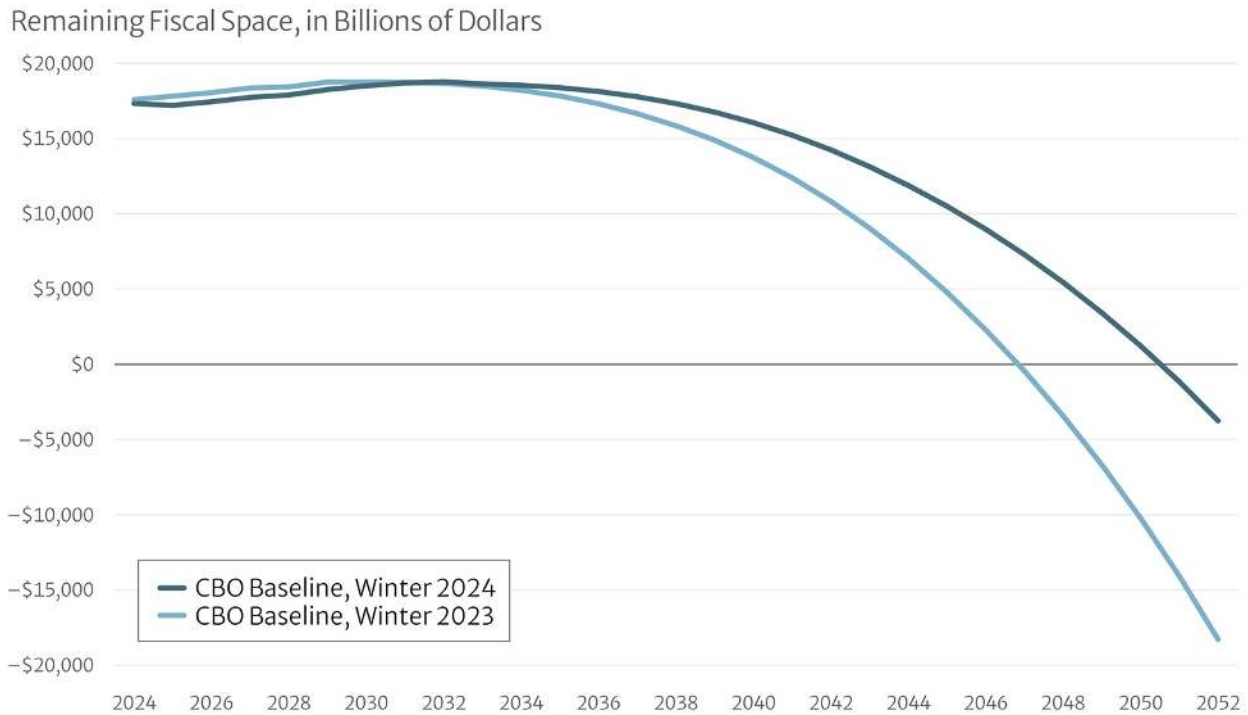
⁹ Congressional Budget Office, "The Budget and Economic Outlook: 2024 to 2034," February 7, 2024, <https://www.cbo.gov/publication/59710>.

¹⁰ William W. Beach, "The Important Immigration Story in CBO's New Budget and Economic Outlook," The Economic Policy Innovation Center, February 12, 2024, <https://epicforamerica.org/blog/the-important-immigration-story-in-cbos-new-budget-and-economic-outlook/>.

¹¹ Paul Winfree (2023). This method is also used by the International Monetary Fund (IMF), the Organization for Economic Cooperation and Development (OECD), among other fiscal agencies. Jarmila Botev, Jean-Marc Fournier, and Annabelle Mourougane. 2016. "A Re-Assessment of Fiscal Space in OECD Countries," Economics Department Working Paper No. 1352.

¹² The difference between the current law and the current policy baselines is that the current policy baseline assumes that the expiring tax provisions from the 2017 tax law as well as other tax laws are extended, the drug price negotiation from the Inflation Reduction Act is fully implemented, and that most of the savings from the Fiscal Responsibility Act (FRA) will be eroded. Both the current law and policy baselines assume the continuation of spending from other expiring provisions such as contract authority from the Infrastructure Investment and Jobs Act (IIJA).

Figure 1: Estimates of Fiscal Space Under Current Law Baselines



Source: Author's calculations using data from the Congressional Budget Office

ECONOMIC POLICY INNOVATION CENTER

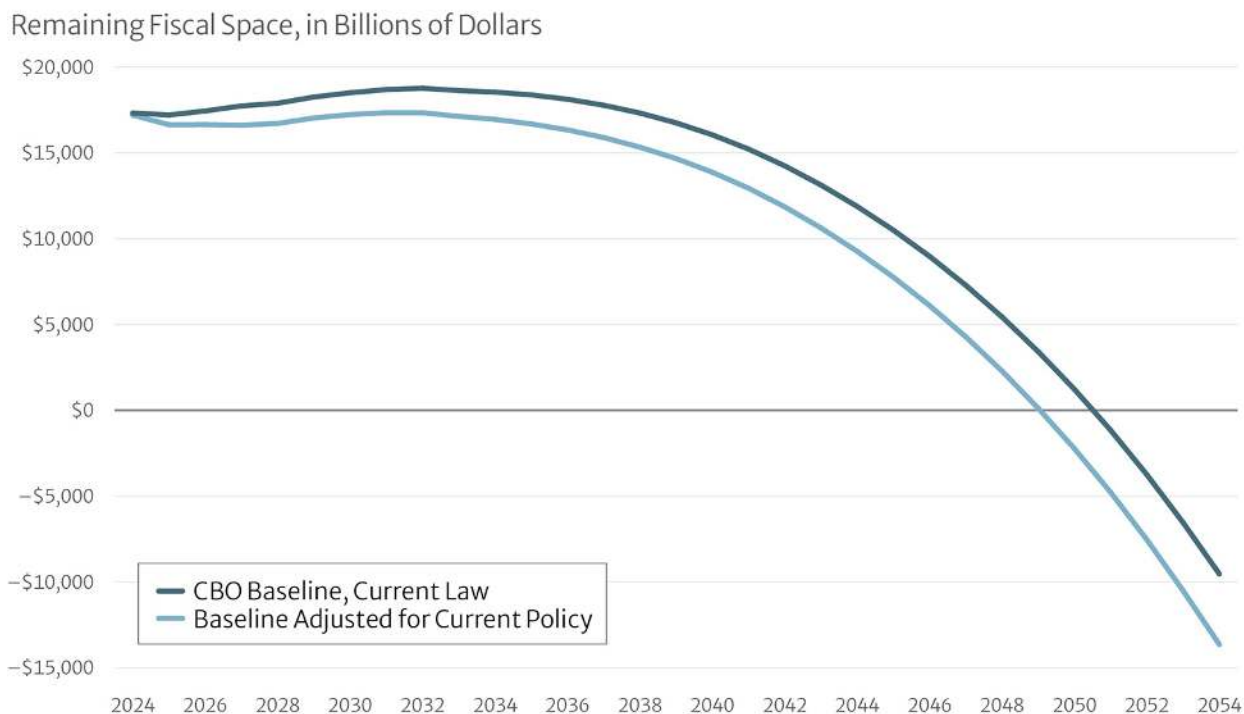


The estimates are also sensitive to macroeconomic factors that could look very different in the future. These include potential growth, migration, and trade. For example, the CBO baseline assumes that net migration will have a significant impact on the labor force and potential growth over the next several decades. Between 2024 and 2033, CBO now predicts an additional 7.4 million people aged 16 and above in the U.S. population relative to last year.¹³ Roughly 80 percent of that increase is because of higher-than-anticipated levels of migration and the remainder is driven by lower mortality estimates because of COVID-19. This amounts to about 5.2 million more people in the labor force by 2033, and significantly higher population growth through the next three decades despite falling fertility rates.¹⁴ Modifying immigration policy to restrict net migration would substantially affect potential growth and reduce projected fiscal space.

¹³ Congressional Budget Office, "The Demographic Outlook: 2024 to 2054," January 18, 2024, <https://www.cbo.gov/publication/59697>.

¹⁴ William W. Beach, "The Important Immigration Story in CBO's New Budget and Economic Outlook," The Economic Policy Innovation Center, February 12, 2024, <https://epicforamerica.org/blog/the-important-immigration-story-in-cbos-new-budget-and-economic-outlook/>.

Figure 2: Estimates of Fiscal Space Under Current Law and Current Policy Baselines



Source: Author's calculations using data from the Congressional Budget Office

ECONOMIC POLICY INNOVATION CENTER 

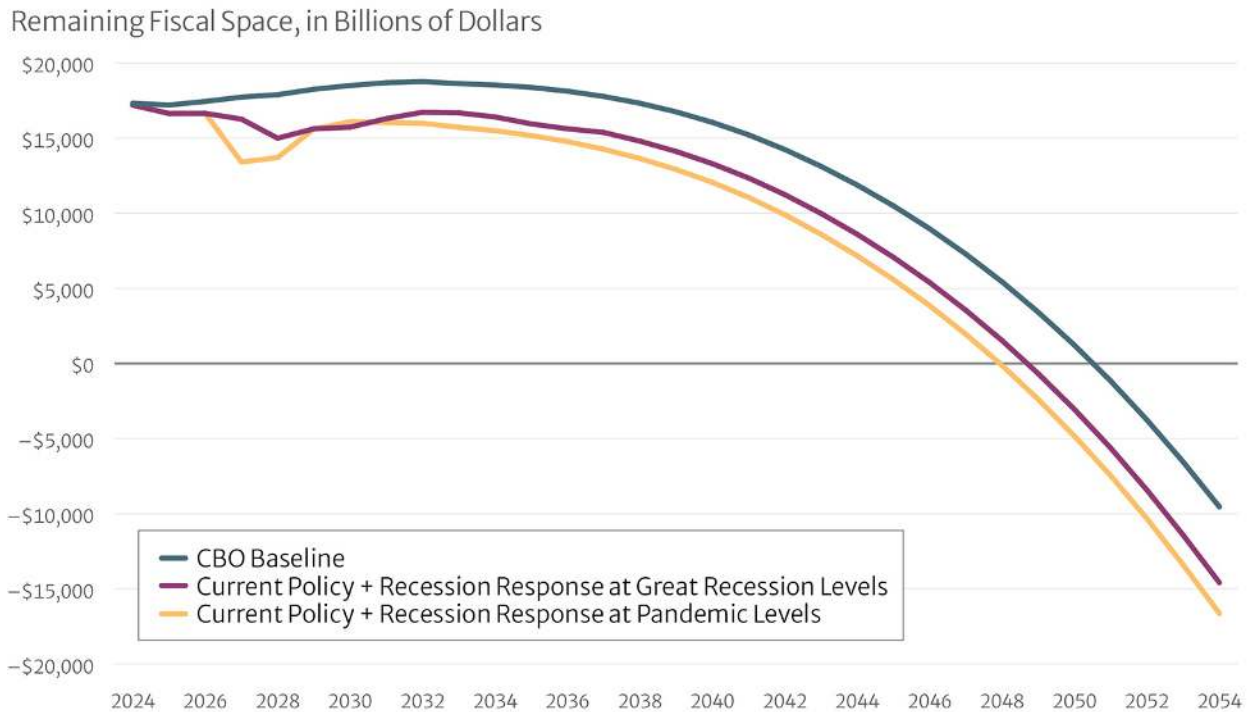
The openness of an economy to trade can also increase the amount of available fiscal space. For example, trade openness may lower the levels of required fiscal stimulus to achieve the same economic effects during adverse fiscal events through exchange rate depreciation, which increases export competitiveness.¹⁵ Therefore, trade policies that limit market access would reduce fiscal space directly and indirectly by reducing potential growth.

Both the current law and policy baselines also assume that the U.S. will not experience an adverse fiscal event in the future. These events might include recessions, wars, or pandemics. Figure 3 shows the sensitivity to fiscal space associated with a relatively short-lived adverse event that leads to persistently higher spending in the future.¹⁶ For this analysis, I assume that the event will occur in 2027. Furthermore, I compare two different levels of fiscal response associated with the Great Recession and the COVID-19 pandemic.

¹⁵ Joshua Aizenman and Yothin Jinjarak, 2010, "De Facto Fiscal Space and Fiscal Stimulus: Definition and Assessment," NBER Working Paper No. 16539, at https://www.nber.org/system/files/working_papers/w16539/w16539.pdf.

¹⁶ This is a conservative assumption given the experience that spending does not return to a pre-recession level once the crisis is over. For example, spending remained about 1 percent higher than immediately before the beginning of the Great Recession even after the initial response had ended.

Figure 3: Estimates of Fiscal Space Under Current Law and Current Policy Baselines, Including Recession Response



Source: Author's calculations using data from the Congressional Budget Office and the Office of Management and Budget

ECONOMIC POLICY INNOVATION CENTER



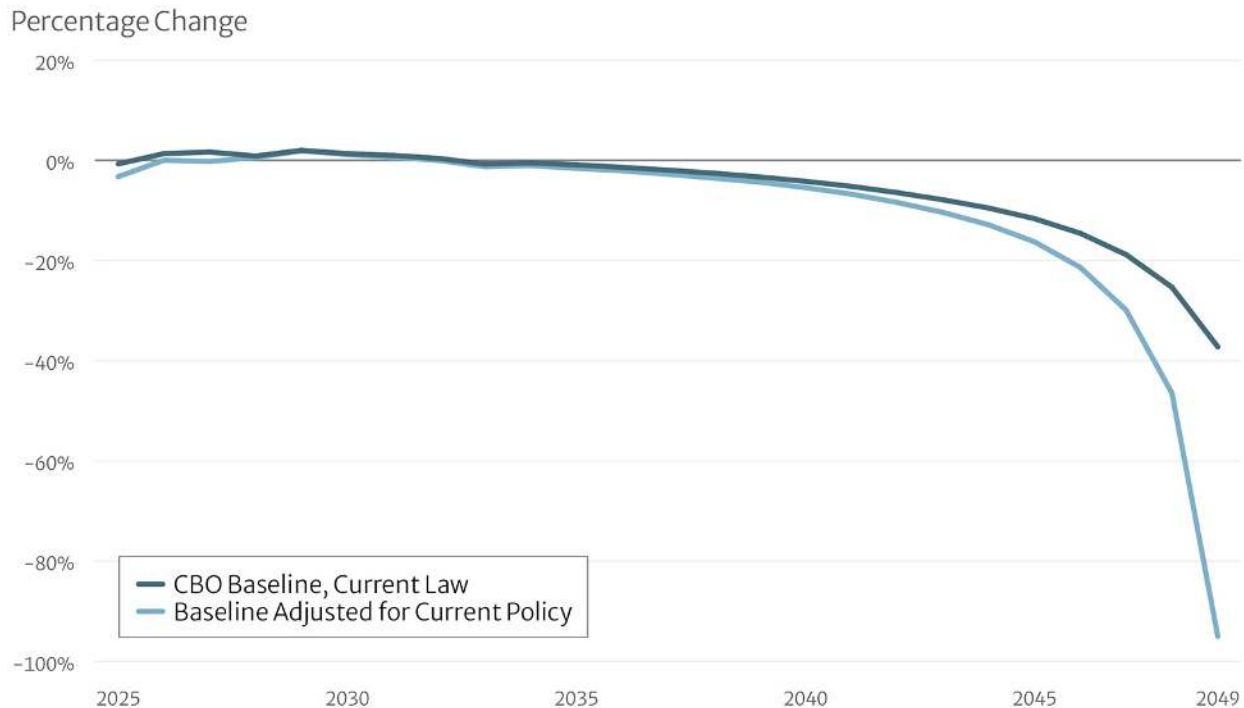
The comparative paths reflected in Figure 3 have several implications. The bright side is that a single, significant adverse event does not fundamentally change the timeline for which the amount of fiscal space will be eroded. That said, with each event, there will be a marginal erosion of additional fiscal space. The problem is that the erosion of fiscal space will soon accelerate to a point where the accumulation of debt will consistently outpace economic growth.

The Erosion of Fiscal Space

More important than the total amount of fiscal space is the rate at which it will erode. It is possible, for instance, to have a relatively small amount of fiscal space but a sustainable budget through the right mix of fiscal and monetary policies alongside continued economic growth. It is also possible to have a large amount of fiscal space but an unsustainable budget through consistently high deficits and little to no economic growth.

As the earlier section notes, fiscal space is primarily a function of interest rates and potential economic growth. Over the next several years, I find that projected economic growth and sufficiently low interest rates will help to maintain fiscal space. However,

Figure 4: Change in Fiscal Space Under Current Law and Current Policy Baselines



Source: Author's calculations using data from the Congressional Budget Office

ECONOMIC POLICY INNOVATION CENTER

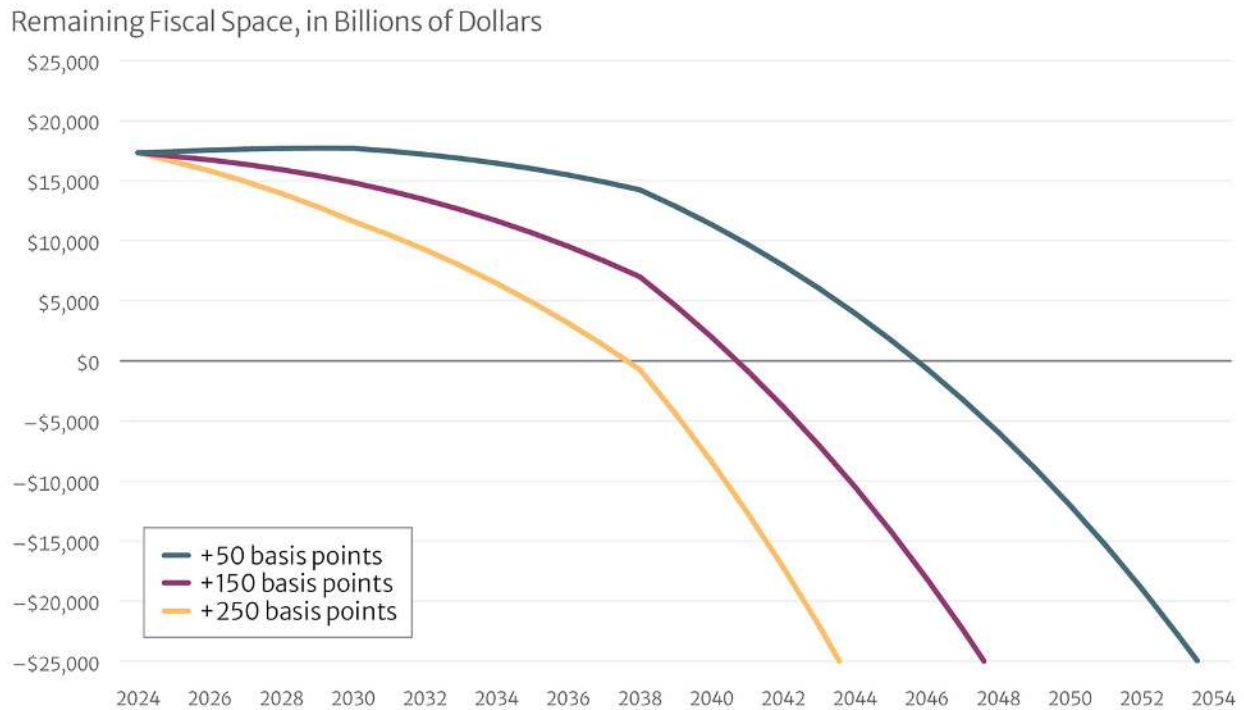


compounding interest costs and continued growth in health spending will begin to erode fiscal space at a rate that will ultimately trigger a debt spiral.

Figure 4 shows the rate of erosion under CBO's current law and the current policy baselines. This shows that, by 2035, the debt will begin to accumulate at a rate with which a growing economy will not be able to keep pace under the spending and revenue policies included in the current law baseline. Under a current policy baseline, that erosion will occur three years earlier, or beginning in 2032.

Figure 5 shows the sensitivity of the beginning of the debt spiral to projections of future interest rates. For example, if interest rates were 50 basis points higher relative to CBO's current law baseline, the debt spiral would begin in 2030. However, if interest rates were much higher (e.g., this figure shows projected fiscal space when interest rates are 150 or 200 basis points higher), the debt spiral would begin almost immediately.

Figure 5: CBO Baseline Adjusted for Higher Interest Rates on Government Debt



Source: Author's calculations using data from the Congressional Budget Office and the Penn Wharton Budget Model

ECONOMIC POLICY INNOVATION CENTER

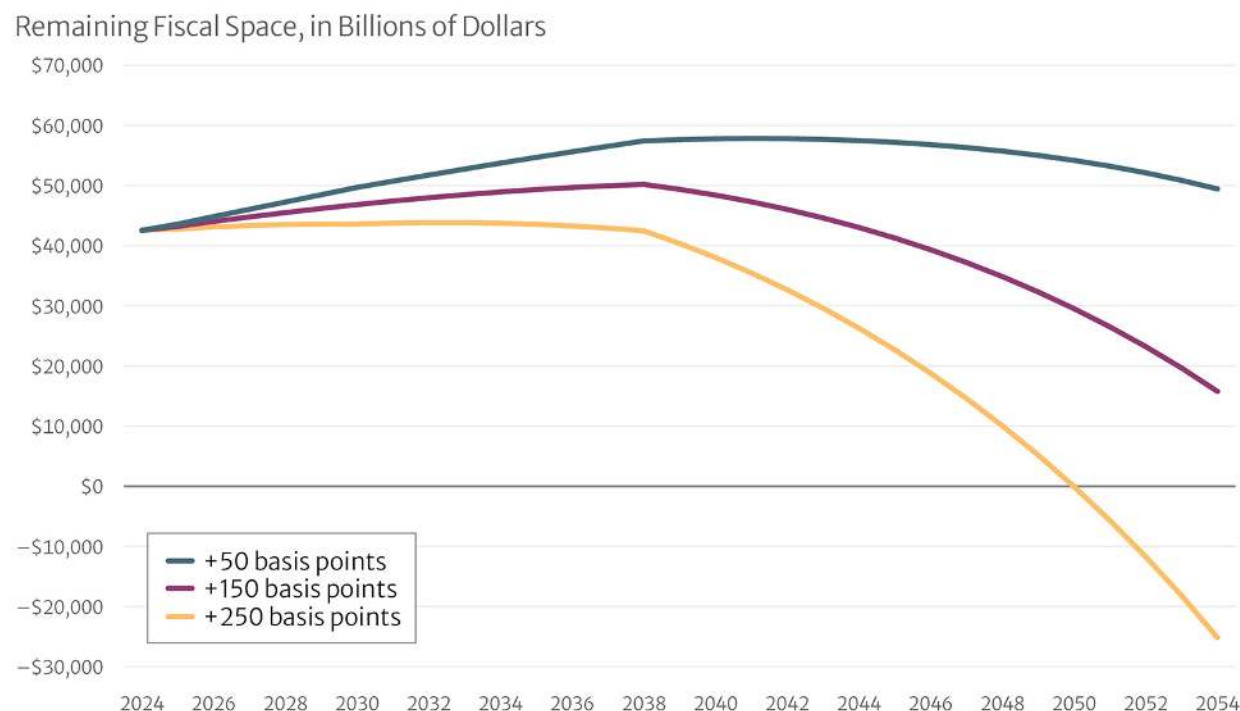


Figure 6 shows an alternative scenario where there is a significant amount of fiscal space (i.e., 250 percent of GDP). Under this scenario, an increase in interest rates relative to the baseline assumptions would still trigger a debt spiral by the late 2030s. Table 1 shows the projected years for when the debt spiral would begin under historically low interest rates. Even under a scenario with historically low interest rates and high fiscal space, there will be a debt spiral within the next 30 years.

The estimates of fiscal space erosion are sensitive to several factors. As this paper has noted, the two most important variables influencing fiscal space are potential growth and interest rates. Under CBO's long-term baseline, real GDP growth averages 2 percent over the next 10 years but then decreases to 1.6 percent by the end of the 30 years.¹⁷ Instead, if real GDP growth averaged 2.4 percent over the next 30 years, economic growth would make up for enough of the erosion so as not to trigger a debt spiral over the same period. This also implies that the economy would be about 10 percent larger over the next 30 years compared to projections.

¹⁷ This also assumes that inflation will be about 2 percent per year.

Figure 6: CBO Baseline Adjusted for Higher Interest Rates on Government Debt, Assuming a High Level of Fiscal Space (250% of GDP)



Source: Author's calculations using data from the Congressional Budget Office and the Penn Wharton Budget Model

ECONOMIC POLICY INNOVATION CENTER 

Table 1: Debt Spiral Sensitivity to Different Levels of Fiscal Space

Fiscal Space (Percent of GDP)	Beginning of Debt Spiral
160%	2033
175%	2036
200%	2041
225%	2046
250%	2052

Source: Author's calculations using data from the Congressional Budget Office

ECONOMIC POLICY INNOVATION CENTER 

Policy Implications

This paper shows that under current law, where tax revenue is expected to increase by \$3.5 trillion over the next 10 years relative to current policy, fiscal space will begin to

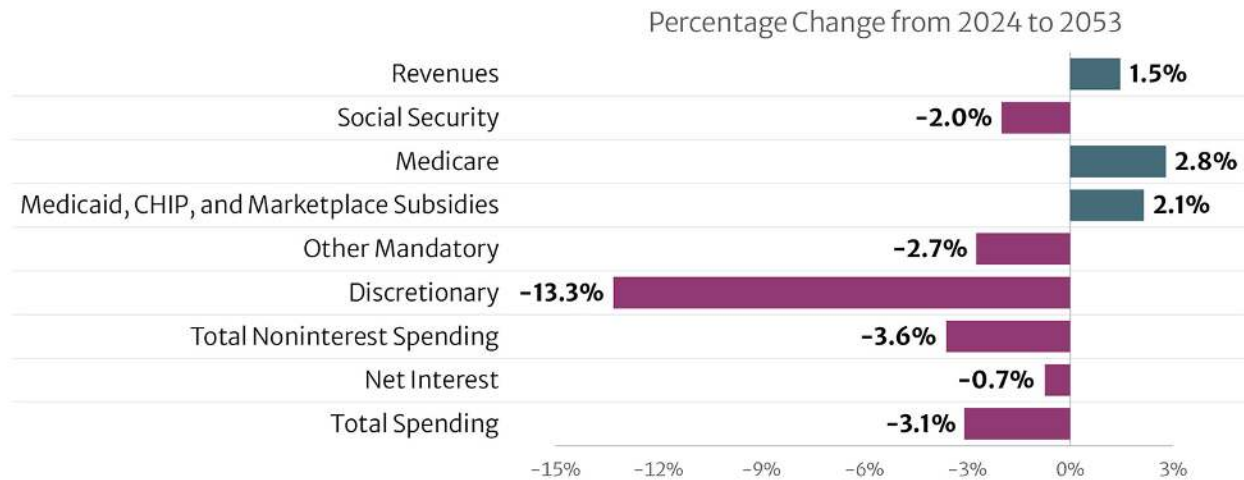
permanently erode by 2035. This erosion will occur almost entirely because of projected spending on net interest and federal health programs. To stop the erosion of fiscal space, deficits will need to decrease significantly, and the growth in spending on health programs will need to decline. Furthermore, it will be important for Congress to preserve potential economic growth by offsetting expiring tax provisions with reductions in spending.

The overall amount of fiscal space is also improved by lower limits on discretionary spending imposed by the Fiscal Responsibility Act. It will be important to preserve those limits while also reducing the growth in federal health spending. In total, to preserve fiscal space through the 2030s, it will require a deficit reduction package equal to about 1 percent of GDP over the same period. This is equivalent to \$2.4 trillion in deficit reduction over the next 10 years, or about \$2.1 trillion in reforms to reduce the primary deficit with the remainder coming from reduced interest costs.

One shortfall with many budget debates in Washington is that they view deficit reduction as simply a series of political trade-offs between spending cuts and increases in revenues. The two most important factors in determining a nation's borrowing constraint are potential growth and interest rates on risk-free assets. Policymakers cannot view these issues in isolation. Rather, any deficit reduction package must endeavor to keep interest rates relatively low, government debt relatively risk-free, and potential growth as high as possible. If deficit reduction continues to be merely the trading of politically acceptable spending cuts for tax increases, we will be back to square one with only the scars from the last budget debate.

Appendix

Figure A1: Percentage Change in Revenues and Spending Between CBO Winter 2023 and 2024 Baselines, FY 2024 to FY 2053



Source: Author's calculations using data from the Congressional Budget Office

ECONOMIC POLICY INNOVATION CENTER

