

Public Debt: How to Cope with the Legacy of the Pandemic

During the pandemic, governments increased their expenditures drastically. According to IMF projections, the debt-to-GDP ratio in advanced countries will be 18 percentage points higher by the end of 2021 than before the pandemic and 10 percentage points higher in emerging markets. With rising deficits, public debt around the world has reached unprecedented levels (at least compared to peacetime). For this issue of the CESifo Forum, we have invited leading experts to discuss how their countries can deal with this legacy. We cover the US, the European Union as a whole as well as individual countries, and the UK. The authors discuss debt in a historical context and point out structural reasons that have contributed to increasing debt levels even before the pandemic, as well as the challenges arising from an aging society. They evaluate how feasible it is to grow out of debt, reduce future deficits, and how low interest rates can contribute to sustainability. Finally, we present evidence from previous pandemics that fiscal support has helped mitigate the adverse effects on inequality.

Barry Eichengreen

The Debate Over US Public Debt: Overburdened or Overwrought?*

In 1981, when the Committee for a Responsible Federal Budget, a think tank and lobby opposing excessive deficits and debts, was created, US federal debt held by the public stood at 25 percent of GDP (see Figure 1). If the committee's founders worried then that the debt was doing untold damage to the economy, one wonders what they would think now, when federal debt held by the public exceeds 100 percent of GDP.

How it got from there to here was not straightforward. For much of the 1980s, the debt ratio rose steadily. In the first year of Ronald Reagan's presidency, tax rates were cut across the board. The top marginal income tax bracket was lowered from 70 to 50 percent and subsequently to 31 percent, the lowest bracket from 14 percent to 11 percent. A retrospective study by the US Treasury Department concluded that the Economic Recovery Tax Act of 1981 reduced federal government revenues, relative to baseline, by 3 percent of GDP each year during its first four years of implementation. The deep 1981–82 recession provided a rationale for those tax cuts, but not for the ongoing deficits and sharply rising debt that persisted

thereafter. This was not the first time the US had seen this political-economy asymmetry: how the political system finds it easier to agree on budget deficits in a recession than on surpluses in an expansion.

The exception to this rule was under President Bill Clinton. Clinton bought into the argument of his National Economic Council head (and subsequently Treasury Secretary) Robert Rubin that balancing the budget would allow the Federal Reserve to adopt a more accommodative monetary policy, allowing low interest rates to ignite an investment boom. The administration's 1993 tax legislation raised the top marginal income tax rate from 31 to 42 percent and expanded the alternative minimum tax paid by high earners. Budget balance followed, but not, alas, the boom in investment, which behaved little differently than in earlier cyclical recoveries. The more important contribution to federal revenues came from the "New Economy," the post-1995 acceleration in produc-

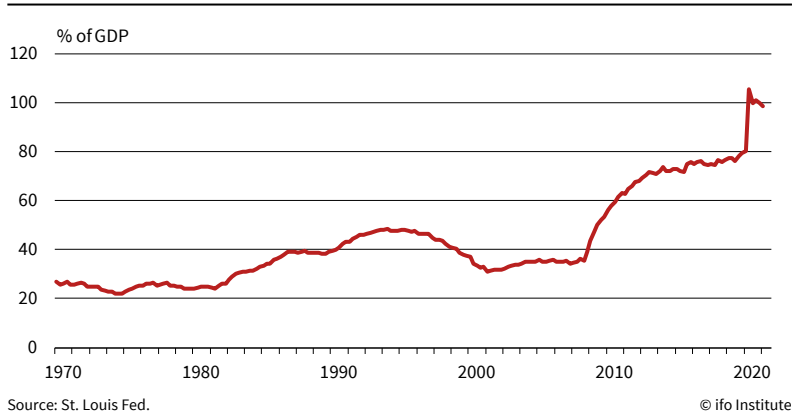


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* This essay draws on his book with Asmaa El-Ganainy, Rui Esteves, and Kris James Mitchener, *In Defense of Public Debt* (Oxford 2021).

Figure 1
Federal Debt Held by the Public



Source: St. Louis Fed.

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tivity growth once firms in the wholesale, retail, and financial sectors reorganized to capitalize on digital technologies (Fernald and Ramnath 2004). Federal revenues rose at such a rate that by the end of Clinton’s second term, financial-market participants were warning of the impending disappearance of all US treasury debt and possible financial dislocations thereupon (see, e.g., Schinasi, Smith, and Kramer 2001).

They needn’t have worried. Starting 2001, federal government debt started rising again. The George W. Bush administration passed three major pieces of debt-augmenting legislation in its first three years: a 2001 tax cut for households, a 2002 act cutting taxes on new business investment, and a 2003 act reducing taxation of dividends and capital gains, while at the same time greatly expanding discretionary saving, including on defense. The tax cuts reflected economic ideology (Vice President Dick Cheney and Defense Secretary Donald Rumsfeld both had been present at the 1974 dinner at the Two Continents Hotel in Washington, D.C., where the economist Arthur Laffer had sketched his eponymous curve). More pragmatically, the cuts were designed to ratchet up pressure on Congress to limit spending through the strategy known as “starve the beast” (Romer and Romer 2009). According to Google Ngrams, published references to this term fluctuated at low levels in the

1980s and 1990s before exploding upward in 2001, coincident with Bush’s first term in office. The other thing that exploded upward was the debt/GDP ratio. The beast continued to feed, evidently, despite the lag in federal revenue growth.

DEBT TO THE RESCUE

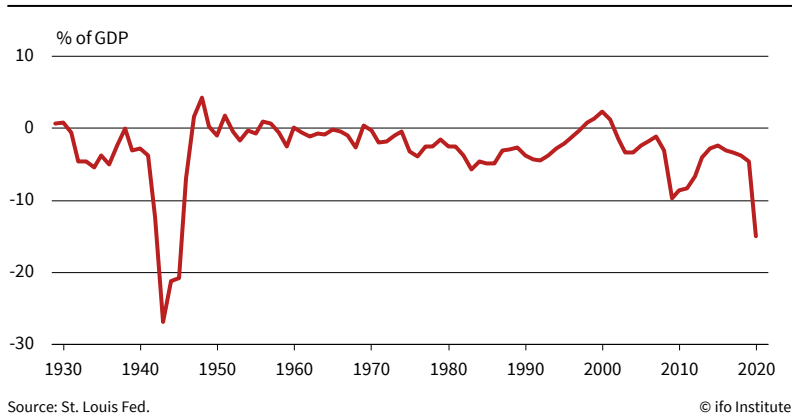
Then came the Global Financial Crisis and Covid-19. The Obama Administration, seeking to address a deep recession on taking office in early 2009, enacted USD 787 billion of tax cuts, extended unemployment benefits and added new federal contracts, grants, and loans. Between 2009 and 2013, federal debt held by the public consequently doubled relative to GDP, reaching 70 percent. The federal government’s response to the Covid-19 pandemic and lockdown was even more forceful: in 2020 the government provided some USD 3.5 trillion in new budgetary resources, though a combination of tax cuts and spending increases, with more following in 2021. From a fiscal standpoint, the lockdown-induced decline in GDP did not help: debt in the hands of the public rose from 79 percent of GDP at the end of 2019 to fully 100 per cent by the end of 2020.

Few would begrudge the federal government responding to serious crises in this way. A government that did not respond to a systemic financial crisis and double-digit unemployment with funds to keep businesses open, the financial system operating, and food on the table would not long retain its legitimacy. The function of public debt is to help governments and societies meet emergencies. It has done so throughout history, when such disasters have taken the form not only of financial crises and pandemics but also wars and natural disasters. Debt issuance in bad times and debt retirement in good times allow them to lean against the macroeconomic wind.

Here, however, there has been a gap between logic and practice. Aside from a brief three-year interval at the end of Clinton’s second term, budget surpluses have been missing in action (see Figure 2).

This is not a new problem. However, the problem may be growing increasingly intractable with the rise in political polarization. The more that individuals and the parties representing them disagree about the level and composition of spending and taxes, the greater will be deficit bias (Yared 2019). The greater the difference in policy preferences, the greater the incentive to cut taxes or ramp up spending on one’s favored programs now, while still in office, and leave the consequences for another day (Alesina and Perotti 1995). Writing in the *CESifo Forum*, one can’t help but observe that this emphasis on the policy consequences of political polarization goes a long way toward explaining the deficits and German hyperinflation of the early 1920s (Maier 1976). It helps one understand the intent of current Congressional Democrats to push through legislation expanding

Figure 2
Federal Surplus or Deficit



Source: St. Louis Fed.

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social programs, with or without attendant tax increases, before possible loss of their House and Senate majorities in the 2022 midterm elections.

SOME PLEASANT FISCAL ARITHMETIC

How worrisome is this deficit bias in light of debt/GDP ratios now exceeding 100 percent? A first observation relevant to the answer is that while debt held by the public relative to GDP has doubled since 2009, interest payments as a share of GDP are no higher. This reflects the secular decline in real and nominal interest rates. Indeed, if one looks back further, to the 1980s and 1990s, the evolution of interest payments as a percent of GDP looks even more favorable, having fallen by fully half (see Figure 3).

Furman and Summers (2020a) argue that the more relevant concept is “real interest payments” as a share of nominal GDP, which incorporate not just nominal interest payments but also the value of the debt that is inflated away each year (as in eq. 1):

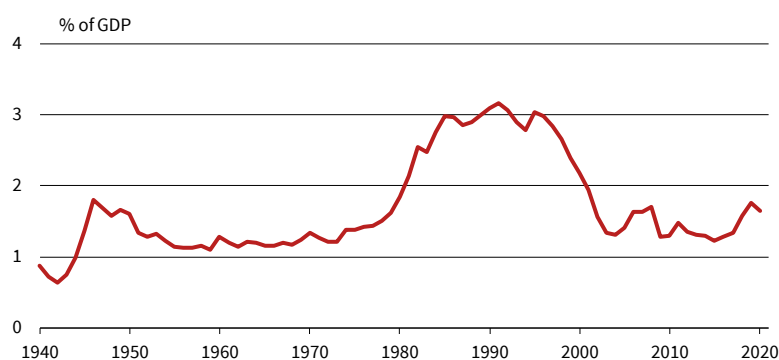
$$\begin{aligned} & (\text{Effective Interest}/\text{GDP})_t \\ & = (\text{Interest}_t - \text{Inflation}_t) * \text{Debt}_{t-1} / \text{GDP}_t \end{aligned} \quad (1)$$

Where *Interest* is total nominal interest payments on the debt and *Effective Interest* is interest payments adjusted for changes in the real value of the debt. (Hopefully *Inflation* is self-explanatory.) This measure is if anything even more reassuring. It shows real interest payments as a share of GDP falling from 1.5 percent at the turn of the century and from a bit less than 1 percent in 2009 to essentially zero today (Furman and Summers 2020b).

Notwithstanding this adjustment, it will be evident from eq. 1 that much of the “work” in keeping real debt-service costs low is being done by the fact that “*Interest_t*” has been falling, and that it has been falling even faster than inflation. (*Inflation_t* has been too low for the inflation adjustment to make a first-order difference.) This observation directs us to the behavior of the real interest rate *r* and the well-known “*r-g* controversy,” where *g* denotes the rate of real GDP growth. One measure of the real interest rate on US Treasury securities, the rate on 10-year Treasury inflation-indexed securities of constant maturity, indicates that the relevant US real interest rate has moved down noticeably since the Global Financial Crisis (see Figure 4). A longer-term perspective suggests that the relevant real rates have in fact been declining since the early 1980s, when the Volcker Fed pushed up nominal rates and pushed down inflation (Eichengreen 2015), or for even longer (see, e.g., Schmelzing 2020).

The explanation for this observed decline in real interest rates is important, since it speaks to the question of how real rates are now likely to evolve. The same decline in real rates is observed, to a first approximation, in a variety of different countries,

Figure 3
Federal Interest Payments



Source: St. Louis Fed.

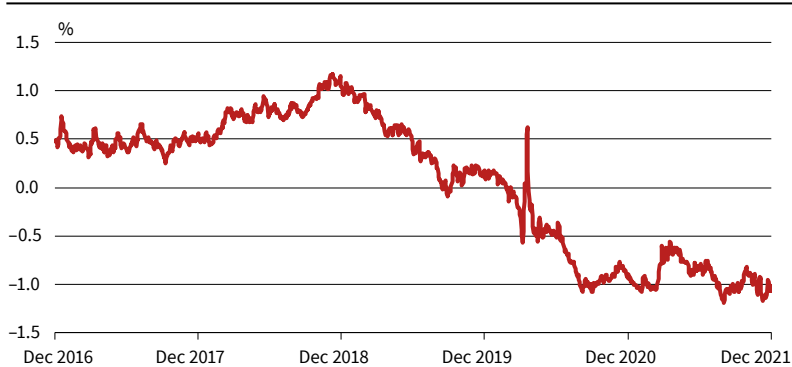
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which points to the predominance of global factors. Some say that the explanation is the high savings of Germany, Saudi Arabia, and above all fast-growing emerging markets such as China (the famous “global savings glut” of Bernanke 2005), which raise savings relative to (notional) investment and force the interest rate to decline to equate the two. Others point to the fact that life expectancy in the advanced economies has risen by nearly five years over the last three decades and that when people look ahead to more years of retirement they sock away more saving while still working (Eichengreen, El-Ganainy, Esteves, and Mitchener 2021). Other recent work points to increased inequality and high savings propensities of the elderly (Mian, Straub and Sufi 2021). Still other observers suggest that interest rates have fallen because the need for physical investment has declined with the shift from manufacturing to services and from physical platforms to digital platforms (Summers 2014). Or it could be that the supply of safe assets — the AAA-rated government securities held by central and commercial banks as reserves and that serve as the bedrock for corporate treasury portfolios—has not kept up with demand (Caballero, Farhi, and Gourinchas 2017). In particular, the fact that real interest rates on investment-grade government securities have fallen faster and further than real interest rates on riskier investments (Blanchard 2019) points toward this last explanation.

Were these trends to reverse direction, so too would the consequences for real interest rates and real interest costs. One can imagine oil-exporting economies saving less as the demand for their petroleum declines and that Chinese households will save less when they enjoy a more generous social safety net. The safe-asset shortage may become less of a constraint now that the major advanced economies have pumped out more Treasury securities—assuming, that is, that those debt securities retain their AAA rating.

A final explanation for low real interest rates and real interest payments on US public debt is, of course, that the Federal Reserve has purchased

Figure 4
Market Yield on U.S. Treasury Securities at 10-Year Constant Maturity^a



^a Inflation-indexed, percent, daily, not seasonally adjusted.
Source: St. Louis Fed.

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those securities via Quantitative Easing (and, to the extent that the focus is on global factors, that other advanced-country central banks have likewise undertaken extensive purchases of debt securities). See Figure 5. The price of Treasury securities is higher, and the interest rate is lower, because there exists this additional demand by the Fed to supplement private purchases. (Note that Federal Reserve holdings are included in government statistics for federal debt held by the public.)

The picture would look much different, and the challenges for debt sustainability would be greater, were the Fed to actively shrink its balance sheet—that is, were it to sell its Treasury holdings back into the market. But the central bank has repeatedly discouraged this expectation (Abramowicz 2021). If the Fed does in fact seek to shrink its balance sheet, it will instead take a passive approach, allowing its holdings of Treasury and agency securities to run off as they mature. This process will be a gradual and therefore be less disruptive to debt management, or so one hopes. Still, the Treasury will face the task of re-funding the maturing debt: of replacing the maturing securities with new ones and placing them at whatever interest rates are required by the markets—higher, presumably, than those prevailing currently. In a happier scenario, the Treasury could simply pay

off the holders of those maturing securities using its cash surplus, assuming it has one.

How quickly the Fed might shrink its balance sheet is anyone’s guess; this will depend on the state of the economy. And history also points to the possibility of no balance-sheet shrinkage—that when the central bank expands its balance sheet, it stays expanded (Ferguson, Schaab, and Schularick 2014).

FISCAL DOMINANCE?

These scenarios raise the potential danger that the central bank will hesitate to raise interest rates even when inflation accelerates, for fear of inflicting capital losses on itself, to the extent that its own balance sheet remains enlarged, and that doing so will increase the government’s real debt service costs by increasing $Interest_t$ in eq. 1 above. Instead, the central bank will allow $Inflation_t$ in eq. 1 to rise, which will reduce the government’s effective interest payments and, over time, shrink the debt ratio by raising its denominator (nominal GDP).

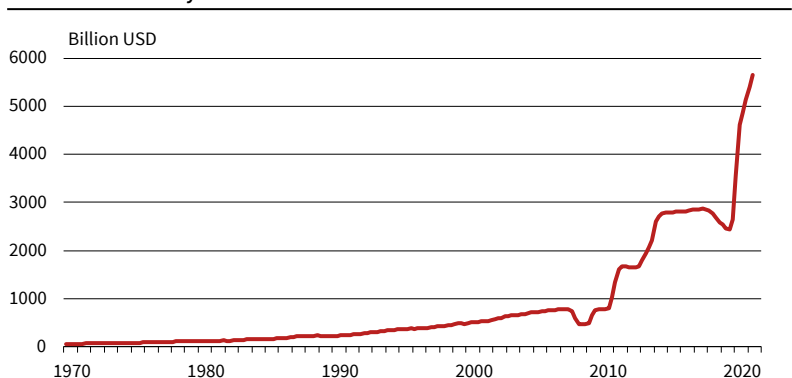
Warnings abound that the federal government’s high debt levels augur financial repression (see, e.g., Reinhart 2012). But such warnings beg two questions.

First, will the strategy succeed in reducing debt/GDP ratios, and if so by how much and for how long? Eq. 1 tells us that higher inflation reduces effective interest payments only so long as it is not matched by higher nominal interest rates. In other historical settings, authorities have used regulation—statutory ceilings, in other words—to prevent interest rates from rising. In today’s highly financialized US Treasury market, however, doing so would not be feasible. Market participants, sensing higher inflation, would shift toward short-duration Treasury securities, driving up long-term interest rates, or shift out of Treasury securities entirely, driving up rates across the entire maturity range. Financial repression would work only for the limited period until this response occurred. In today’s highly-articulated Treasury markets, it’s hard to imagine that this period would be long.

Hence, for financial repression to be effective in reducing effective interest payments for more than a short period (equivalently, for it to significantly reduce the real burden of debt), the Fed would have to repeatedly surprise market participants with higher inflation than they anticipated previously. It would have to continue purchasing government bonds in whatever amounts were needed to maintain a cap on interest rates, and thereby continuously enlarge its balance sheet.

Bringing us to the second question, namely, will the Fed be willing to subordinate its inflation target to debt management imperatives? To rephrase, will a central bank that has been seeking to communicate more clearly with the public and to enhance its

Figure 5
Federal Debt Held by Federal Reserve Banks



Source: St. Louis Fed.

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credibility with the markets now instead miscommunicate its intentions and willingly put that credibility at risk? Doing so would seem contrary to the “stability culture” now deeply ingrained in this and other central banks (Tognato 2014). It might be argued that other branches of government, by threatening central bank independence, can intimidate the central bank into doing otherwise. But other interests would push back. By running inflation at significantly higher levels, to the surprise of investors, the central bank would be inflicting losses on the pension funds, insurance companies, and banks that hold government bonds—not to mention on individual investors. Populations are aging. Older people dislike inflation for self-interested financial reasons, not least that they invest in bonds. And they vote in disproportionate numbers.

PENSIONS

This mention of older people brings us finally to the pension liabilities of US federal, state, and local governments. The unfunded pension liabilities of state and local governments are estimated at between USD 1 trillion and USD 4 trillion, depending on the discount rate. USD 4 trillion is an impressive figure; it equals German GDP. Moreover, states and municipalities have limited ability to debt finance the shortfall. Forty-nine of fifty US states are subject to balanced budget laws or constitutional provisions dating back to the 19th century. Municipalities similarly have limited ability to issue debt, since their tax base is mobile, and since most localities do not control the property and sales tax rates from which the bulk of their revenues accrue (rather, state governments do). A USD 4 trillion unfunded pension liability is a serious problem, but it is likely to be met mainly by cutting other public services and by pension restructuring, to be achieved voluntarily and through municipal bankruptcy proceedings (Ergungor 2017).

The single most important public pension is Social Security, through which the federal government provides about a third of all income for individuals 65 and older. Social Security operates on a pay-as-you-go basis, with current workers and their employers paying taxes into a trust fund from which benefits for retirees are drawn. Reflecting demographic changes, the program’s annual costs first exceeded its income in 2021, causing the trustees to begin drawing down the trust fund. Estimates released by the trustees in late 2020 indicated that the trust fund has sufficient assets for the system to continue paying currently-mandated benefits only through 2034.

From that point, benefits would have to be reduced by roughly a quarter were nothing else done. More likely, there will be a combination of increases in the retirement age, which currently stands at

66, to reflect increases in longevity and working lifetimes, and increases in taxes paid into the trust fund. Currently, employees and employers pay matching Social Security taxes of 6.2 percent, respectively; that flat rate could be raised. Wages subject to Social Security tax are capped at USD 142,000; this cap could be modified, as President Biden has advocated.

Less likely, given the historical precedent that Social Security is funded through its own dedicated tax, is that the shortfall will be made up by transfers to the trust fund of the government’s general revenues. The trustees estimate that unfunded obligations through the end of the 21st century have a present value in excess of USD 17 trillion. This looks like an alarmingly large number in a USD 21 trillion economy. Note, however, that this obligation actually materializes only over a long period during which the economy will also be growing. The same trustees put the present value of GDP through the end of the century at more than USD 1,600 trillion.

CONCLUSION

Then how sustainable is the current federal government debt of 100 percent of GDP? By how much would the government have to reduce its deficit, or how large a surplus would it have to run, to prevent that debt from rising explosively relative to GDP? Answering this requires a judgment—three judgments actually. What real rate of interest should we anticipate? How fast can GDP grow? And how large a budget surplus can be sustained by the US political system?

Recall the textbook equation governing debt dynamics:

$$\Delta d = (r - g)d - s, \quad (2)$$

where d denotes the debt/GDP ratio, r and g are the real interest rate and real growth rate as before, and s is now the budget surplus as a share of GDP. Setting $\Delta d = 0$ and inverting:

$$s = (r - g)d.$$

With $r = -1$, as currently, and $g = 2$, consistent with Congressional Budget Office projections out through 2031, a budget deficit of 3 percent of GDP is consistent with a stationary debt ratio. Were real interest rates to rise to 4 percent, however, that deficit would have to give way to a surplus of 2 percent of GDP. And the longer the adjustment is delayed, the heavier will be the inherited debt, and the larger the requisite steady-state surplus. Figure 2 shows that a surplus of 2 percent of GDP has been seen in only one year since 1950. The deficit in 2021 is running at 13 percent of GDP. Can the US political system do better? We are about to find out.

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