

his century, public debt has soared to record highs. Across advanced and emerging market economies and most individual countries the story is the same: a steady rise in debt since 2000 followed by a sudden spike after the financial crisis in 2008 and an even larger one during the beginning of the pandemic in 2020. The origins of this global increase in public indebtedness predate the novel coronavirus and extra public spending to support households and businesses. In the United States, the federal government has not run a fiscal surplus since 2001. Its public debt now stands at a towering \$30 trillion, equivalent to about 130 percent of GDP, the highest since records began in 1791. Even countries that borrowed large sums in the past to make it through wars, natural disasters, and sovereign debt crises are today borrowing more than ever relative to the size of their economies.

It does not seem a coincidence that these past 20 years have also been a time of great success for central banks in controlling inflation. Since 2000, prices in many countries have grown at steady rates that are close to official targets. This golden age of monetary policy had three features: an institutional arrangement that kept central banks independent of finance ministries (and monetary policy thus separated from fiscal policy); a clear inflation-targeting mandate for monetary policy; and an operational strategy with monetary policy focused on interest rates at different tenors using multiple tools. With low inflation came low and stable interest rates on public debt. As a result, interest payments remained steady as a share of government budgets even as the debt itself continued to grow.

Yet as prices rise more rapidly around the world—and annual inflation in the United States accelerates at the fastest pace since the early 1980s—is this golden age about to end? With interest rates rising already in many emerging markets, will we see a run of sovereign debt crises? Will governments seek to restore fiscal rectitude and rein in their debt even at the risk of sparking social unrest? With public debt so high is the fiscal impact of monetary policy now so large that central bank independence is no longer sustainable? Must monetary and fiscal policy now be coordinated by a single agency? Few questions in macroeconomic policy today are as pressing as these.

The 'specialness' of public debt

There are two ways for governments to sustain public debt. The first is to run primary surpluses in the future by collecting more in tax revenues than is spent on transfers and purchases. Throughout the 19th and 20th centuries, actual and expected surpluses sustained public debt; after wars or natural disasters, governments would tighten the strings of the public purse. In the 21st century, however, surpluses are small or nonexistent in almost all advanced economies. Forecasts for the United States point to large deficits for at least the next 30 years. In most European countries, the ability to raise taxes or cut spending on public services seems limited. It is hard to argue that the increase in public debt in the past 20 years has come with a commensurate increase in future taxes or cuts in spending.

Instead, the recent rise in public debt has been sustained in another way. Governments have been able to borrow from investors at a lower rate than those same investors use to discount the future. That discount is the rate of return the investors would get by investing in the private economy. The gap between the two returns means that the government collects a form of debt revenue. In other words, if the government used the amount it borrowed to invest in the private capital stock, this revenue would be the profit from doing so. Even if the government did not do so directly, the gap in returns represents an opportunity cost for the lender, and so a gain for the government that borrows, which it collects by rolling over the debt at this low rate. The debt will be sustainable as long as it keeps its special ability to attract investors in search of the safety, liquidity, or whatever other advantage the debt provides. It is this "specialness" of public debt that allows it to pay such a low interest rate.

The debt of some governments is more special than that of others. Governments in advanced economies (especially the United States) are able to pay much less than those in emerging market economies. Countries that through their strong reputation and institutions have been able to maximize this debt revenue have been able to sustain a larger increase in debt, both before and during the pandemic. Common to all countries, however, is their interest rate ties to the global equilibrium interest rate, sometimes called the "r-star," at which the world demand for and supply of savings are the same. The r-star has been falling





for at least two decades as a demographic transition to older populations has led more people to save for retirement, a productivity slowdown has curtailed the demand for capital, and higher inequality and financial risk have made households want to save more and firms to invest less.

Both advanced and emerging market economies have to different degrees benefited from these secular changes to sustain their debt. Moreover, these trends are not expected to change suddenly in the next few years. And even if they were to do so, they would not affect government debt alone. A sudden boom in productivity would, for instance, raise the interest rate on the debt. But it would also raise the marginal product of capital and the government's tax revenues—making debt easier to sustain.

Monetary policy also affects debt revenue, but in other ways. Because many governments today borrow mostly in their own currencies, the cost of public borrowing also depends on the value of the currency when they pay back. Moreover, when a sovereign state borrows, it cannot strictly be forced to repay (unlike a private individual or company), so there is a voluntary side to honoring the debt. Inflation and sovereign default are the two risks a holder of public debt must bear and that undermine the attractiveness of the debt and so decrease the debt revenue for the government. Monetary policy has contributed to keeping debt revenues high in the past two decades through at least five channels. Whether these channels continue to keep debt revenues high is crucial to determining debt sustainability in the future.

Five sustainability channels

First, there is a temptation to use inflation to lower the real value of the payments the government must make. Related to this is monetization of debt-the printing of currency to make debt payments—which leads to inflation as well. Central bank independence has taken these off the table in the past two decades for many countries. It has made public debt safe from inflation risk, especially for foreign investors for whom even the anticipation of inflation comes with losses through a depreciating currency. Could this change? The history of central banking shows that after national emergencies, such as the pandemic,

finance ministries often do take over the functions of the central bank.

Second, central banks earned inattention capital. Year after year, they delivered steady inflation of about 2 percent. Households and firms got used to not paying any attention to movements in prices, since even through financial crises, electoral cycles, and commodity and oil price shocks, the central bank would deliver inflation near the target. This expectation of low and stable inflation meant that the nominal interest rates the government was charged followed the downward trend of the r-star. This may also change. The inflation spike of 2021-22 was a shock to this inattention. In the United States, there were already clear signs during the summer of 2021 that households had started expecting higher future inflation. If this persists, it will translate into higher interest rates on government debt, as lenders will ask to be compensated for the loss of value in the currency in which they will be paid.

Third (and relatedly), bondholders typically respond to high inflation by seeking more compensation to cover the risk that inflation will fluctuate further. The price stability of the past two decades maximized the debt revenue for the government both by delivering low inflation and removing this inflation risk. Further, as inflation and government interest rates fluctuate, so will the interest expenses of the Treasury. In the absence of fiscal buffers, this would make it more likely that finance ministries will raise taxes, possibly in ways that are distortionary, thus increasing the overall risk to investments in the economy.

Since the financial crisis, central banks have contributed in a fourth way to raising debt revenue. An implication of their macroprudential policies is that they have required financial institutions to hold safer and more liquid assets, while at the same time making it more costly for financial institutions to hold risky private assets. The demand for government bonds rose owing to their ability to serve as collateral and satisfy regulators. And by making the prospect of another financial crisis less likely, central banks have lowered the expectation that fiscally costly bailouts will be needed in the future. Altogether, macroprudential policy has contributed to making

higher public debt sustainable, even if this was not the main goal. Again, however, there is a risk that things could change. In the (unlikely but possible) scenario where the main risk may not be a financial crisis but a fiscal crisis, the macroprudential arithmetic becomes unpleasant. The market for government bonds provides the foundation of collateral for the whole system. When this market becomes the main source of financial instability, the line that separates macroprudential policy from financial repression is thin. The central bank may use its powers to raise the demand for government bonds to prevent a crisis in government debt. But a Treasury that is unable or unwilling to service the debt will take advantage of this and run larger and larger deficits. At some point, the market will collapse.

There is a fifth link between monetary policy and the ability to sustain high debt through debt revenue. Over the past decade, quantitative easing policies have led central banks to take long-term government bonds from private hands and replace them with overnight bank deposits at the central bank. Interest rates were low and not so different at shorter or longer terms, so this came with little cost to the resources of the central bank because the interest it collected on the government bonds was slightly higher than what it paid to the banks. But central banks have traditionally responded to a spike in inflation by raising short-term interest rates well above their long-term value. If this were to happen today, the central bank would experience losses: it would have to pay depositors more than the interest it collects on the government bonds it bought in the past that still pay a low interest rate. The losses could be offset by printing currency and collecting seigniorage—a sure way to generate high inflation. Alternatively, the losses could be passed on to the Treasury by asking it to recapitalize the central bank. This would add to the government's deficit. Either way, the maturity of the public liabilities held by the private sector has become shorter as a result of quantitative easing. A sudden change to this situation would require a sell-off of public bonds that could itself trigger a crisis. Countries are therefore stuck in a situation where short-term interest rates may have to rise quickly, which means the state as a whole would face tighter budgetary constraints.

The case for price stability

There is one way to ensure that central banks continue to contribute to sustainable public debt through

these five channels: commit to price stability. Price stability protects the public debt from inflation risk, anchors inflation expectations, eliminates risk premiums associated with inflation, reaffirms the focus on inflation for macroprudential policy, and guides the balance sheet policy of the central bank and the extent to which the government fiscally backs it. Price stability maximizes debt revenue and contributes to sustaining the public debt.

The case for price stability may seem surprising since it goes against a common instinct: when the public debt is high, as it is today, wouldn't some inflation help? The inflation tax that comes at the expense of bondholders complements the taxes collected from other forms of distortionary taxation in a second-best world where the debt must be paid in one distortionary way or another. Moreover, higher inflation at some point in the future may seem a price worth paying if the central bank keeps interest rates low and so avoids an immediate debt crisis. In short, isn't keeping a high public debt sustainable in conflict with price stability?

The answer is "no" because these supposed benefits of inflation happen only if inflation is unexpected. When inflation comes as a surprise to bondholders, it transfers wealth from their pockets to those of the government, just as it did in the United States in 2020. As long as the central bank can keep policy rates low and increase the size of its balance sheet without undermining the credibility of the inflation mandate, the longer-term real interest rates on government bonds remain low and the debt revenue high. But actual inflation can deviate from expected inflation only for so long. Once investors in government bonds start expecting or fearing inflation, the five arguments laid out above call for monetary policy to privilege price stability. Public debt sustainability that relies on surprising bondholders with inflation for just the right amount of time is risky and unsound policy.

Governments can avoid sovereign debt crises without sharp turns to austerity as long as public debt is seen as special and its associated debt revenues are high. This requires central banks to be more independent, not less so. It requires an even stronger commitment to an inflation target by governments and central banks alike. Unexpected inflation cannot last long. Sustaining today's high public debt, however, is a job for many years to come.

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