

NOVEMBER 2024

An Elephant in the Room: *The U.S. National Debt*

“A national debt, if it is not excessive, will be to us a national blessing.” – Alexander Hamilton

Author:
Jason D. Pride, CFA
Chief of Investment Strategy and Research

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Executive Summary

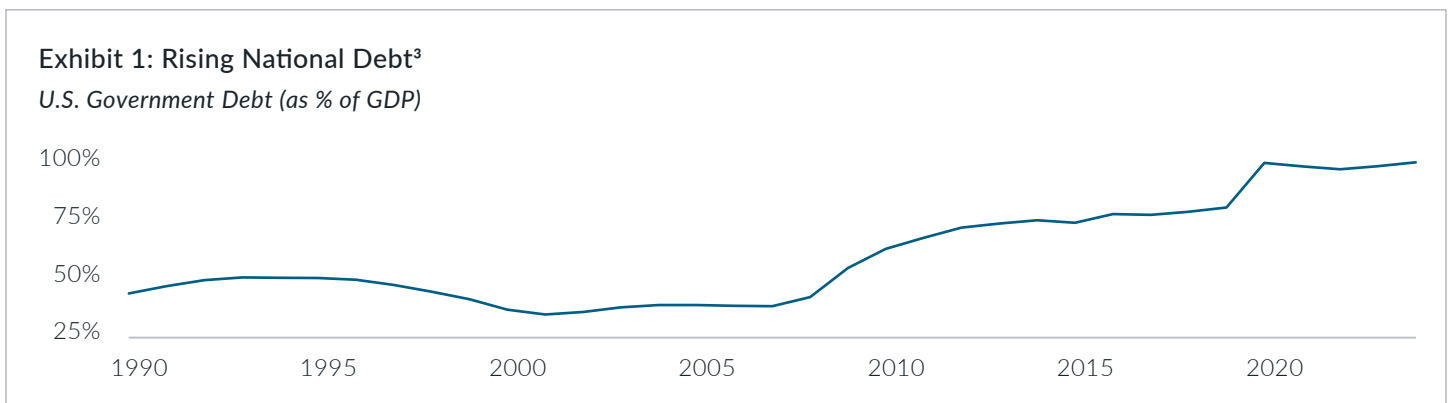
- Low on the priority list in the last election cycle was any serious discussion of the national debt, which has grown to over \$28 trillion, or 99% of U.S. Gross Domestic Product (GDP).¹
- Debt levels above 100% of GDP have proven problematic for other nations, but large economies with a prominent reserve currency may have latitude to near 200% of GDP.
- Deficits and rising debt balances have recently led to credit rating reductions, but U.S. interest rates remain at levels consistent with a strong investment-grade credit.
- While it is unclear exactly where the red line is for U.S. borrowing, each year of delay pushes the U.S. closer to that line and makes the solution more difficult.
- The U.S. still has time to establish a plan to gradually reduce deficits by an amount modest enough so as not to be an insurmountable headwind to economic growth.

Don't Talk About the Deficit

"If we got one-tenth of what was promised to us in political...speeches there wouldn't be any inducement to go to heaven."
– Will Rogers

The 2024 election cycle was one of the more intense and perhaps volatile in modern history. It included such unique events as criminal trials, assassination attempts and the withdrawal of an incumbent candidate. Amid the campaign rallies, presidential and vice-presidential debates and barrage of advertisements and campaign mail, the U.S. government debt was discussed only occasionally. The topic of the national debt is seldom among top campaign issues, and most polls do not include it as an option to select or rank when surveying voters. Once the rallying cry of Tea Party Republicans just over a decade ago and a focus of third-party candidate Ross Perot in the 1990s, the issue of the national debt seems to have faded into the background of politics.

Yet the U.S. government has continued to spend and accumulate debt, driving the total to over \$35 trillion, or \$28 trillion when holdings by other government agencies and government trust funds such as Social Security are excluded (Exhibit 1). This \$28 trillion net government debt equates to roughly 99% of U.S. GDP, close to the 100% level that can be problematic for a nation.²



Source: Glenmede, Congressional Budget Office

Data as of 9/30/2024

¹ Data represent the U.S. net government debt as a percent of GDP. Net government debt is publicly held debt and excludes the portion of public debt that is held within the government by agencies or government trust funds such as those for Social Security.

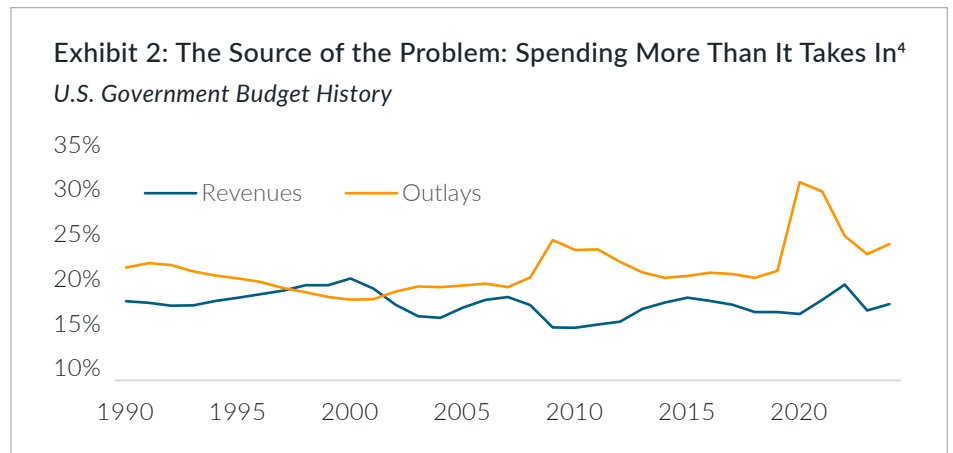
² Reinhart, Carmen M. and Kenneth S. Rogoff. "Growth in a Time of Debt." NBER Working Paper 15639, National Bureau of Economic Research. January 2010. <http://www.nber.org/papers/w15639>.

³ Data shown are the U.S. government debt as a percent of U.S. GDP, a measure of overall economic activity, for 1990 through 2024. U.S. government debt represents publicly held debt which excludes the portion of public debt that is held within the government by agencies or government trust funds such as those for Social Security. The figure for 2024 reflects the latest estimate from the Congressional Budget Office.

Defining the Issue – Outspending Revenues

“Income twenty shilling a year, expenditure nineteen and sixpence – happiness. Income twenty shillings a year, expenditure twenty shillings and sixpence – misery.” – Charles Dickens’ Mr. Micawber in David Copperfield

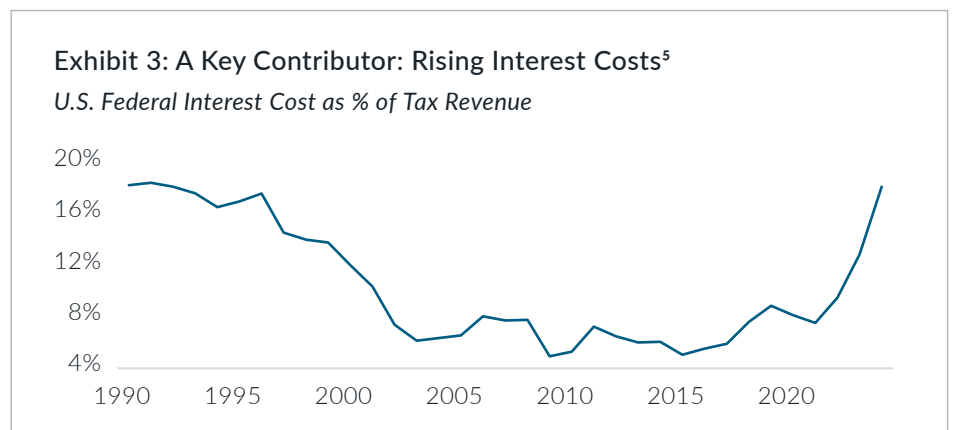
The heart of the issue is rather simple, yet the solution is quite difficult. The U.S. government collects revenues mostly from individual and corporate taxes as well as tariffs and charges for certain programs. The government then uses these revenues on direct spending and transfers to individuals, states, corporations and other organizations according to legislated fiscal programs. However, the total amount collected does not match or exceed the total amount spent or distributed. This is essentially the case with most governments, including the U.S. (Exhibit 2).



Source: Glenmede, Congressional Budget Office

Data as of 9/30/2024

Governments that run a deficit and can borrow vast sums of money from investors use that borrowing power to fund their deficits, growing their outstanding debt. Further, debt and deficits work in a reinforcing circle. As debt rises so does the total interest owed on it, adding to government spending. That rising spending widens the deficit, leading to larger borrowing, more debt and higher interest costs. This cycle can be accentuated or mitigated by fluctuations in interest rates. The U.S. has recently been facing this overlap of influences where accumulated debt and rising interest rates have worked together to cause the total interest cost on the national debt to rise, both on an absolute basis and as a percentage of the budget (Exhibit 3).



Source: Glenmede, Congressional Budget Office

Data as of 9/30/2024

Further, government borrowing can crowd out borrowing by other parts of the economy – municipalities, corporations or even individuals – since there is a limited amount of funds seeking investment opportunities. In theory, crowding out such borrowing can reduce the ability of the economy to grow and impact the collection of tax revenues, the top line of the government’s budget. Separately, bond market investors can begin to shift their pricing of government debt, reacting to rising debt by requiring higher interest rates for their investment into government bonds.

To address debt and deficits, a political candidate would need to propose raising taxes, reducing spending – potentially on popular government programs – or a combination of both. Not quite the inspiring words of a campaign speech. Further, it is possible that representatives of either political party believe that the national debt and deficits are less of an issue

⁴ Data shown are total revenues and total outlays for the U.S. government. Revenues are funds that the federal government collects from the public using its sovereign power such as individual income taxes, corporate income taxes, social insurance taxes, duties on imported goods and various fees and fines. Outlays are checks, disbursed cash or electronic transfers from a federal agency that fulfill a federal spending obligation or reimbursement associated with either discretionary spending programs such as defense spending or mandatory spending programs such as federal benefit programs and other payments to individuals, businesses, nonprofit institutions and state and local governments.

⁵ Data shown are net interest costs, total interest paid minus interest received, as a percent of tax revenues collected each year as measured by the Congressional Budget Office.

for their administration than the administration after them. Presidential administrations have four or maybe eight years in office and are judged on the behavior of the economy during their term in office, not beyond. If debt and deficits are not perceived to be an urgent issue, an administration is incentivized to focus on more timely matters.

As a result, the issue of the rather large national debt continues to be the elephant in the room but not yet a disruption. The key question is when will the elephant become a more prominent concern? At what point will the U.S. national debt reach an unsustainable level, posing a serious obstacle for the government and the economy?

History as a Guide

“Creditors have better memories than debtors.” – Benjamin Franklin

The urgency of addressing the U.S. national debt can be evaluated, at least in part, by considering debt events of other nations. It is not unheard of for a significant nation state to encounter difficulty with its finances. There is a documented history of developed nations defaulting on their debt or restructuring it to more favorable payment arrangements to pull themselves out of the holes they dug due to excessive spending (Exhibit 4).

Many of the defaults listed in Exhibit 4 occurred more than a century ago, and complete data on the circumstances are quite thin. The details around those events may not be as applicable to today’s circumstances other than the recognition that developed nations can and do run up significant debts and default. By contrast, consider the more recent events that provide an ability to see the details of their circumstances (Exhibit 5). A review of defaults and restructurings by developed nations and other significant countries within the last 30 years appears to point to a red line of around 100% debt-to-GDP, above which most of these events occurred. This is consistent with some of the original findings of Reinhart and Rogoff.⁷

None of these economies have a dedicated national currency that is used widely as a basis for international transactions and as

| Country | Debt Defaults and Restructurings |
|-----------------|--|
| Austria | 1796, 1938, 1940 |
| Cyprus | 2013 |
| U.K. | 1340, 1472, 1594, 1932 |
| France | 1558, 1624, 1648, 1661, 1701, 1715, 1770, 1788 |
| Germany/Prussia | 1683, 1932, 1939 |
| Greece | 1932, 2011 |
| Ireland | 2013 |
| Japan | 1942 |
| Portugal | 1560, 1936, 1940, 1981, 2013 |
| Spain | 1557, 1575, 1596, 1607, 1627, 1647, 1936, 1940, 1981 |

Source: Erce, A., E. Mallucci and M. Picarelli. “A Journey in the History of Sovereign Defaults on Domestic-Law Public Debt.” International Finance Discussion Papers 1338, Board of Governors of the Federal Reserve System. 2022.

| Country | Year of Default | Peak Debt/GDP |
|-----------|-----------------|---------------|
| Argentina | 2002 | 167% |
| Argentina | 2020 | 104% |
| Cyprus | 2013 | 109% |
| Greece | 2012 | 168% |
| Ireland | 2013 | 130% |
| Indonesia | 2000 | 87% |
| Portugal | 2013 | 131% |
| Russia | 1998 | 144% |

Source: Erce, A., E. Mallucci and M. Picarelli. “A Journey in the History of Sovereign Defaults on Domestic-Law Public Debt.” International Finance Discussion Papers 1338, Board of Governors of the Federal Reserve System. 2022.

⁶ The table shows a list of years in which each nation defaulted on their debt by not making a repayment or restructuring their debt in order to avoid a default.

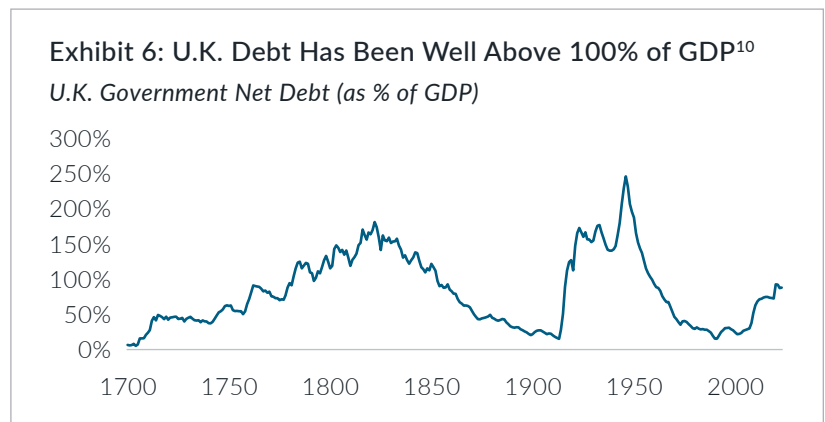
⁷ Reinhart, Carmen M. and Kenneth S. Rogoff, *This Time Is Different – Eight Centuries of Financial Folly* (Princeton, NJ: Princeton University Press, 2009).

⁸ Data shown represent government debt as a percent of GDP, a measure of overall economic activity for select developed or very large emerging market nations that have defaulted on or restructured their national debt within the last 30 years.

a world reserve currency.⁹ History seems to show that developed economies whose governments operate and control a major world reserve currency have historically been afforded more leniency. This can be seen in the history of debt for the U.K. and Japan, both of which operate a major world reserve currency.

United Kingdom

The U.K.'s debt has extended above 100% of GDP twice in the last 300 years, once during the early 1800s and again in the early-to-mid 1900s (Exhibit 6). The rise in government debt in the 1800s was the result of a series of wars over the prior 50+ years, including the Seven Years' War, the American Revolutionary War, French Revolutionary War and Napoleonic Wars. In the late 1800s, although the debt service payments on its borrowing consumed close to 40% of annual government revenues, sustained economic growth coupled with an absence of any additional major conflicts allowed the nation to reduce its debt gradually from its peak to a low of near 30% at the beginning of the next century.



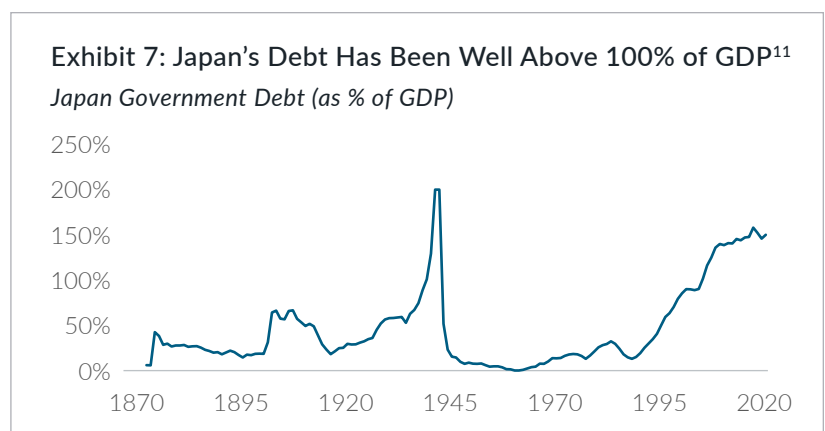
Source: Glenmede, Federal Reserve Bank of St. Louis, International Monetary Fund Data as of 9/30/2024

A second round of debt-financed wars began in 1913 with World War I, leading the nation's debt to rise quickly to levels experienced 70 years earlier. After World War I, the U.K.'s then Prime Minister David Lloyd George appointed the Geddes Commission to cut spending and to repair the nation's financial position, making some progress but also causing economic difficulty due to the magnitude of swift cutbacks. Any advancement, however, was interrupted and essentially lost with World War II. At its start, the U.K.'s debt was still over 130% of GDP, and the cost of that engagement caused it to climb much further.

Importantly, from the early 1800s through the early 1900s, the U.K. was arguably the world's leading empire, and it had the most prominent world reserve currency at the time. This status afforded it far more capacity to borrow and endure than a smaller or emerging economy. However, the second round of debt-financed wars proved to be the beginning of more difficult times. While its borrowing capacity was quite high, its use put a significant strain on the economy. During this period, the U.S., which bore less of the economic burden of the wars relative to the size of its growing economy, surpassed the U.K. in its relative standing, and the U.S. dollar assumed its current position as the leading world reserve currency.

Japan

Japan has experienced a similarly significant capacity to borrow (Exhibit 7). Japan's status as a leading nation and the yen's place as a top world currency have afforded it the ability to increase the amount of its borrowing substantially relative to the size of its economy. The first period was, similar to Britain, during World War II, but unlike



Source: Glenmede, International Monetary Fund Data as of 9/30/2024

⁹ An additional common trait is that many of these national governments borrowed heavily from external, nondomestic sources. Higher proportions of external funding of borrowing creates higher risk due to the fickleness of the availability of that funding.

¹⁰ Data shown represent government debt as a percent of GDP for the U.K. for periods after its formation in 1800 and for Great Britain prior to and including 1800. Government debt includes publicly held debt and excludes the portion of public debt that is held within the government by other inter-governmental agencies or divisions for periods after 1980.

¹¹ Data shown represent Japan's government debt as a percent of GDP, a measure of overall economic activity. Government debt includes publicly held debt and excludes the portion of public debt that is held within the government by other inter-governmental agencies or divisions for periods after 1980.

the U.K. it did not gradually bring that debt balance down over the following decades. Instead, immediately after the war, the Japanese government introduced the “war indemnity special tax,” imposing a 100% tax on amounts paid on war indemnities, exchanged the old yen currency for a new yen currency, froze bank deposits and conducted a property investigation for the purpose of confiscation. Additionally, the Bank of Japan printed large amounts of bank notes, which drove inflation up and significantly reduced the value of previous bonds and interest payments relative to the economy.

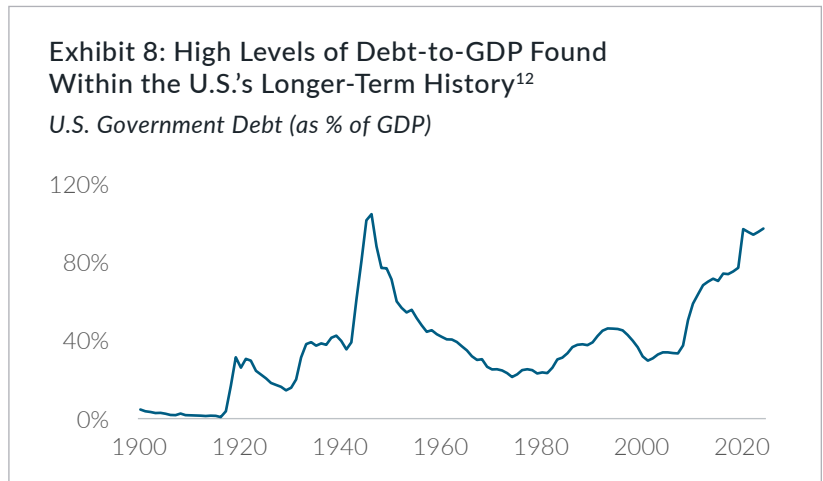
More recently, Japan has seen net debt rise to 158% of GDP after years of deficits and borrowing throughout Japan’s lost decades that followed the pre-1990 boom. Fortunately for Japan, its central bank has been able to keep interest rates (and inflation) generally low, buying it decades of time to fix its ailing economy. The ability of Japan to sustain such high debt levels has surprised many observers, but it appears heavily rooted in the yen’s status as a primary reserve currency and the magnitude of government debt that is owned by individuals, corporations and other structures within Japan’s domestic borders.

United States

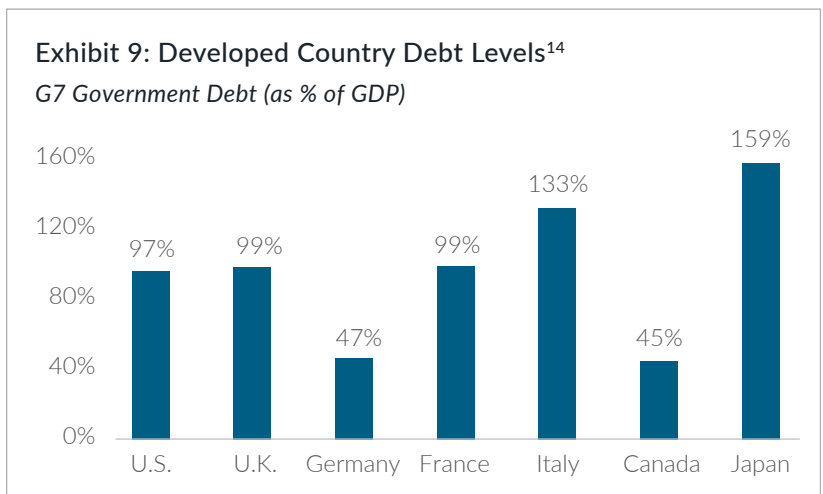
The U.S. has had its own brush with extreme accumulations of debt (Exhibit 8). Like other Allied nations during World War II, the U.S. incurred substantial costs both during and after the war, when the U.S. contributed heavily to rebuilding efforts and allowed for the restructuring of a number of countries’ war-time debts. Afterward, the U.S. debt balance declined relative to the size of the economy, partly as a function of fiscal constraint but mostly as a result of the post-WWII growth of the domestic and global economies.

Still, these three observations provide some substantiation that the limits are higher for a country that occupies a leading spot on the global stage and has authority and control over a world reserve currency. However, the number of situations where this has been tested is limited, leaving investors with an imprecise estimate of where the exact limits sit. Experts at the Penn Wharton Budget Model estimated that the U.S. debt held by the public cannot exceed about 200% of GDP without destabilizing consequences, but the choice of such a round figure illustrated even their uncertainty in the exact red line.¹³

Another consideration is that we live in a relative world almost as much as we do in an absolute one (Exhibit 9). The current magnitude of U.S. government debt is high by historical standards but is interestingly not too dissimilar to its peers on the global stage. The U.S. is often thought of as one of the “cleaner dirty shirts” in the laundry basket, that is, one of the shirts that is still chosen



Source: Glenmede, Congressional Budget Office, Federal Reserve Bank of St. Louis
 Data as of 9/30/2024



Source: Glenmede, International Monetary Fund, Statistics Canada
 Data as of 12/31/2023

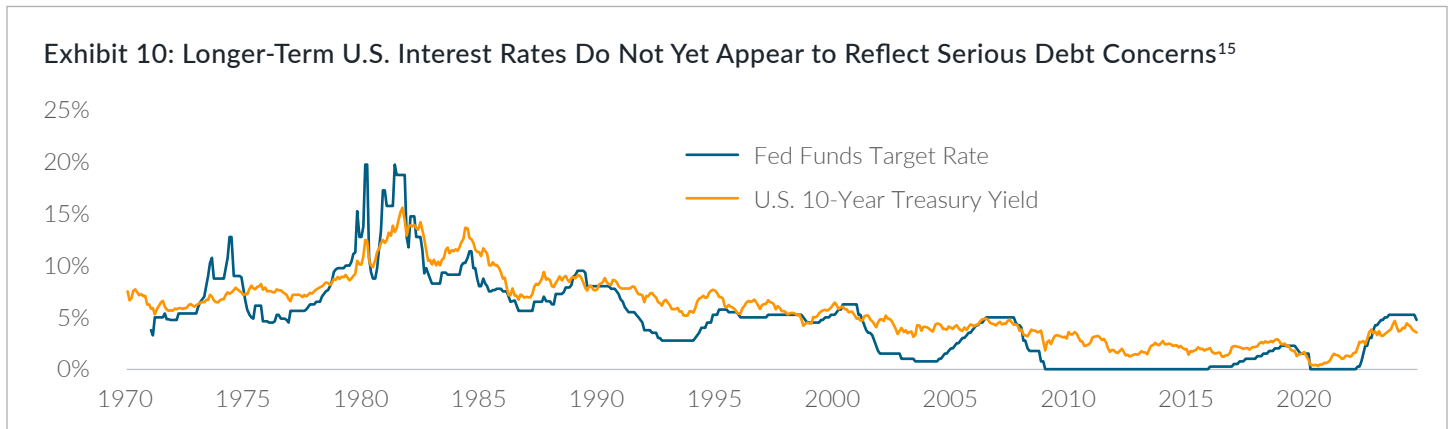
¹² Data shown represent the U.S. government debt as a percent of U.S. GDP, a measure of overall economic activity. U.S. government includes publicly held debt and excludes the portion of public debt that is held within the government by agencies or government trust funds such as those for Social Security for periods after 1980. The figure for 2024 reflects the latest estimate from the Congressional Budget Office.

¹³ Gokhale, Jagadeesh and Kent Smetters. “When Does Federal Debt Reach Unsustainable Levels?” The Penn Wharton Budget Model. October 6, 2023. <https://budgetmodel.wharton.upenn.edu/issues/2023/10/6/when-does-federal-debt-reach-unsustainable-levels>.

¹⁴ Data shown are the net government debt as a percent of national GDP for the G7 countries. Canada’s net debt excludes social security program funds.

when no clean shirts are available. There is a large and rather persistent demand for fixed income investment opportunities to counterbalance equity allocations and to match against fixed-term liabilities such as insurance payments made by large insurance companies, as just two examples. Such demand often finds its way to the largest, “least dirty” fixed income options.

Importantly, while net debt-to-GDP in the U.S. is again approaching its historical high, interest rates on long-term bonds appear to be well contained relative to the short-term interest rate that is controlled by the Federal Reserve (Exhibit 10). If markets were overly concerned about the ability of the U.S. to repay its obligations over the next decade, one would think they would require a higher rate of interest to compensate for that risk.



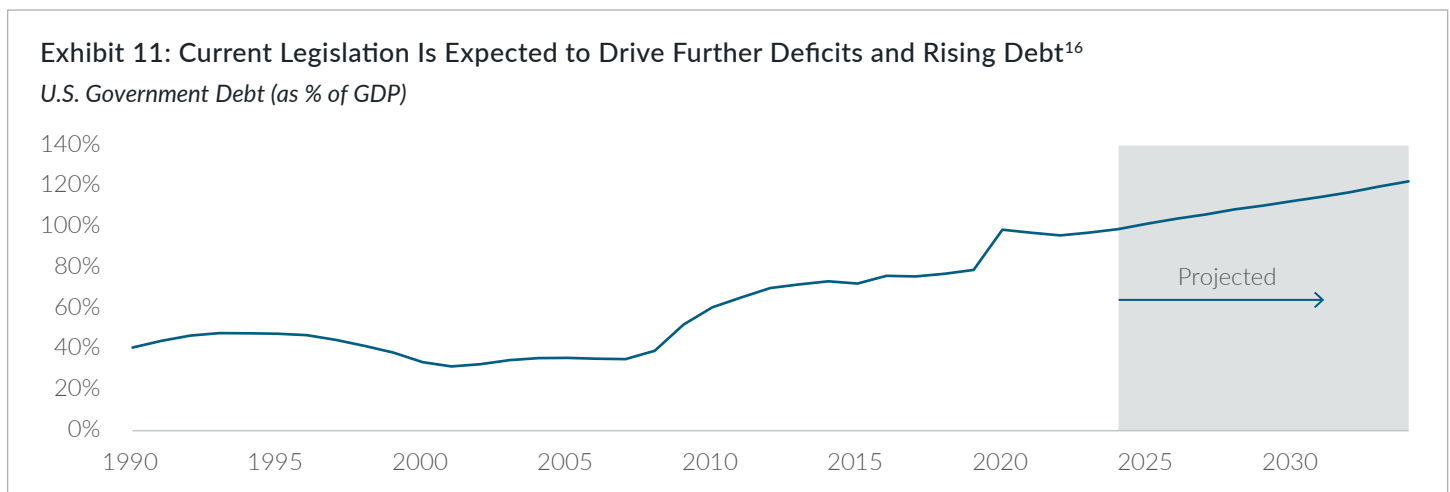
Source: Glenmede, FactSet

Data as of 9/30/2024

In Search of a Solution

“Everybody is in favor of general economy and particular spending.” – Anthony Eden, 1956

While the exact limit of how much debt a leading nation such as the U.S. with a prominent world reserve currency may be allowed to accumulate is unclear, history has shown that having debt accumulate to the extreme boundaries has led to unfortunate outcomes long-term for those nations’ economies. Current projections from the Congressional Budget Office show that legislation, spending patterns and growth in the economy are currently expected to lead to ongoing deficits and a continued steady climb in U.S. debt relative to the size of the economy (Exhibit 11).



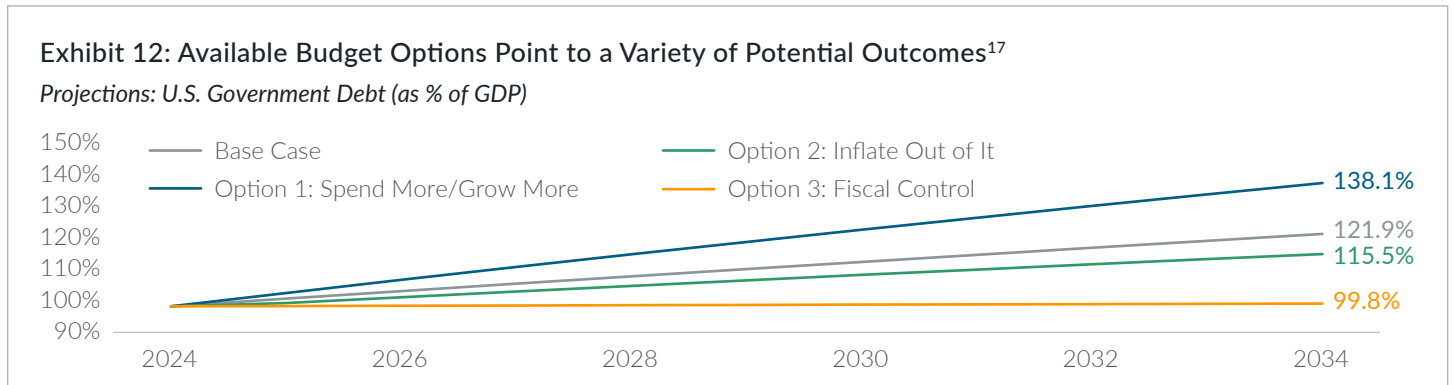
Source: Glenmede, Congressional Budget Office

Data as of 9/30/2024

¹⁵ Data represent the fed funds target rate as set by the Federal Reserve and the yield on 10-year U.S. Treasury bonds.

¹⁶ Data represent U.S. government debt as a percent of U.S. GDP, a measure of overall economic activity. U.S. government debt includes publicly held debt and excludes the portion of public debt that is held within the government by agencies or government trust funds such as those for Social Security for periods after 1980. The figure for 2024 reflects the latest estimate from the Congressional Budget Office. The gray region represents projections from the Congressional Budget Office.

A second key observation from the examples of the U.K., Japan and the U.S. is that a country that exhibits an ability to stabilize its debt-to-GDP is afforded the leeway of time by markets. The below analysis uses a financial model to explore the various options that politicians and economists have proposed to solve the problem of excessive government debt (Exhibit 12).



Source: Glenmede, Congressional Budget Office

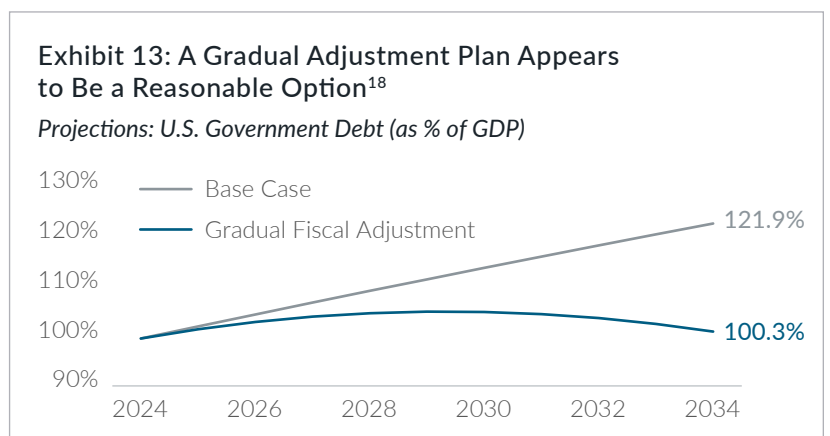
Data as of 9/30/2024

Option 1 (Spend More/Grow More) attempts to lift the economy through increasing deficit spending, with the associated economic growth outpacing the growth in government debt. Unfortunately, this solution does the opposite. Unless each dollar spent magically drives disproportionately efficient economic growth, debt accumulates and compounds faster than the growth of the economy, driving debt-to-GDP up at a faster pace.

In Option 2 (Inflate Out of It), the U.S. government attempts to use the power of its central bank to drive up inflation, pushing the nominal economy up at a faster pace than the debt balance is growing. While that may sound great in theory, markets will quickly recognize that inflation is running higher and reprice the yields on longer-term bonds in reaction, nullifying the impact. That is to say nothing of the tremendous political and social costs that come along with general deterioration in the standard of living. History has shown time and again the folly of inflating one's way out of debt. Nevertheless, if this is a path taken, it generally appears to be an insufficient solution even if bond markets do not reprice accordingly.

Lastly, in Option 3 (Fiscal Control), the government instantly adjusts its spending plans. In modeling, this appears to have the most direct and lasting impact, but the interaction between government spending and the economy is uncertain. Also, such an immediate shift could weaken the economy significantly and prove quite painful for the average company and individual.

Alternatively, a more gradual plan appears the most plausible and the least likely to cause a shock to the entire system (Exhibit 13). Under such a plan, instead of implementing a complete stop on deficit spending, the U.S. government could, for example, set in motion a sequence of



Source: Glenmede, Congressional Budget Office

Data as of 9/30/2024

¹⁷ Data shown are projections for U.S. government debt as a percent of U.S. GDP, a measure of overall economic activity. U.S. government debt includes publicly held debt and excludes the portion of public debt that is held within the government by agencies or government trust funds such as those for Social Security. Base Case reflects a scenario where current deficits continue for the next 10 years. Option 1: Spend More/Grow More reflects a scenario where deficit spending is increased in an effort to accelerate growth. Option 2: Inflate Out of It reflects a scenario where the Federal Reserve holds rates slightly (0.5%) lower and allows inflation to run slightly (0.5%) higher. Option 3: Fiscal Control reflects a scenario where the budget deficit is immediately reduced from 3.6% to 0.5%. Actual results may differ materially from projections.

¹⁸ Data shown are projections for U.S. government debt as a percent of U.S. GDP, a measure of overall economic activity. U.S. government debt includes publicly held debt and excludes the portion of public debt that is held within the government by agencies or government trust funds such as those for Social Security. Base Case reflects a scenario where current deficits continue for the next 10 years. Gradual Fiscal Adjustment reflects a scenario where the Federal Reserve holds rates slightly (0.5%) lower and allows inflation to run slightly (0.5%) higher and the budget deficit is gradually reduced by 0.5% per year. Actual results may differ materially from projections.

more modest reductions in spending relative to the economy (around 0.5% reduction implemented each year). Debt would still increase in the first few years but would likely level off relative to GDP and could eventually begin to decline once economic growth surpasses the magnitude of deficit spending relative to the economy. The gradual implementation of spending reductions likely would limit the impact of such actions in any one year, reducing the focused stress on the economy. In addition, shorter-term interest rates could be held marginally (0.25% to 0.5%) lower than longer-term targets, allowing inflation to run marginally higher (0.25% to 0.5%) than longer-term targets. But such combinations should be explored and implemented only gradually so as not to shock the system or create unintended consequences.

In short, history has shown, and some simple budget modeling suggests, that the recipe or prescription for the malady of excess debt is a reduction in spending in some form, with some sprinkles of economic growth and higher-but-still-modest inflation. Fortunately, interest rates on government debt typically rise more slowly than market interest rates since rates on existing debt only change as debt rolls off and is replaced by newly issued debt. This gradual movement in interest costs affords the U.S. economy the opportunity to make such gradual adjustments.

The intersection of economic theory and political reality is quite a difficult one. The opportunity set of solutions does not exist in a vacuum, and the politicians who implement them will have to answer to the voters. It should not be surprising that, when asked, people are in favor of financial responsibility but may not be quite as pleased when they see the programs that benefit them are cut. Further, beyond the rising cost of the interest on the national debt (18% of tax revenues), the largest portions of the government budget are important spending programs such as Social Security (29% of tax revenues), Medicare and other major healthcare programs (37% of tax revenues), and national defense (20% of tax revenues), complicating the spending cut considerations. The politics surrounding such shifts are difficult and often quite unpopular, and it should not be shocking that the discussions of what taxes need to be raised or what spending needs to be reduced give way to tax cuts and additional spending programs on the campaign trail.

Implications for Investors

“One who, fully prepared, awaits the unprepared will be victorious.” – Sun Tzu, The Art of War

As a result, investors should delay making sudden judgments about the sustainability of the U.S.’s ability to continue to pay its debt in the near to intermediate future or their consideration of where interest rates should sit. At the time of this writing, the government has accumulated a large amount of debt but remains a preferred national investment-grade credit option for global investors, with an extraordinarily deep market for bonds, and is sitting upon a similarly robust world reserve currency base.

Investors, however, should always establish contingency plans, since strategy and preparation are free exclusive of the preparation time. A quick glance at fixed income investment markets shows that alternatives, perhaps not as deep or robust of markets but still reasonably large in their own rights, exist and provide competitive yields accompanied by slightly different risk profiles (Exhibit 14). For tax-exempt investors, a broad selection of investment-grade corporate bonds, mortgage-backed securities or even global bonds are viable options, each with their own degree of separation from government finances. In fact, higher yields are associated with some of these options since one is exchanging government credit risk for a modest amount of credit



Source: Glenmede, FactSet, Bloomberg

Data as of 11/7/2024

¹⁹ Data shown are yields to worst for various fixed income indices. U.S. Treasuries reflects the Bloomberg U.S. Treasury Bellwethers (10Y) Index. U.S. Corporate Bonds reflects the Bloomberg U.S. Aggregate Corporate (AA) Index, an index of AA-rated corporate bonds. Municipal Bonds reflects the Bloomberg Municipal Bond index, an index of investment-grade municipal bonds. Mortgage-Backed Securities reflects the Bloomberg U.S. Aggregate Securitized MBS Index, an index of mortgage-backed securities. Global Bonds reflects the U.S. Global Aggregate, an index of global investment-grade bonds. One cannot invest directly in an index.

risk from the underlying issuers. For taxable investors, municipal bonds, backed by the financial position of U.S. states, cities, municipalities and government-related projects, provide a similarly competitive opportunity, with lower yields than Treasuries but preferred tax treatment at the federal and potentially state level, depending on the investor's location.

Global bonds, also investment grade, carry a lower current yield given how yields are priced internationally. However, they offer the advantage of denomination in currencies other than the U.S. dollar, which may prove to be one of the better diversification options if the government does encounter difficulties since such events would likely be accompanied by depreciation in the U.S. dollar. Outside of fixed income, international equity allocations, which would also be denominated in non-U.S. dollar currencies, would likely provide some diversification benefits during such a scenario. Lastly, some investors may prefer a small allocation to other stores of value like gold, which could prove valuable in such an environment.

Many of these options are quite viable for taxable and tax-exempt investors. While not immediately necessary for protection against some imminent financial event for the U.S. government, they do offer the benefit of diversification of exposures, which when the time for such worries comes, will be considered far more valuable than they are today.

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