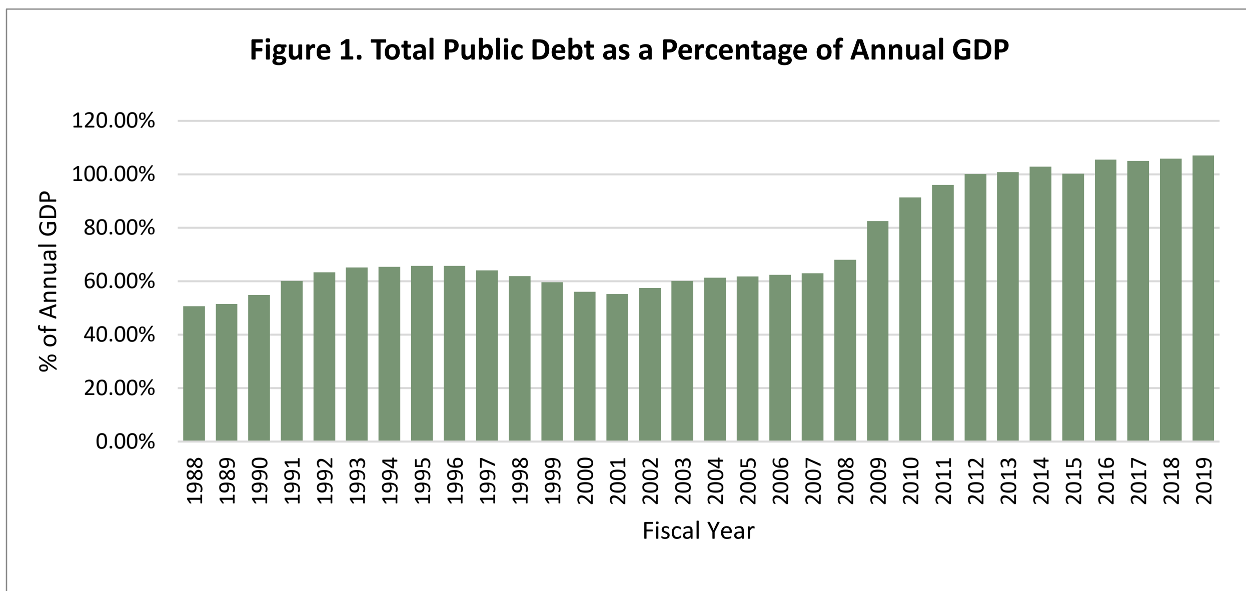
The Cost of The US Public Debt

Zach Riddle – August 28, 2020

US public debt has been on the rise on an absolute and relative to GDP basis. The total public debt currently represents over 100% of annual GDP and is rising due to fiscal stimulus tied to coronavirus relief efforts and deficit spending. While the absolute and relative to GDP values are frequently discussed, other statistics such as debt servicing costs are discussed less frequently. While the national debt has steadily increased over the past 30 years, debt servicing costs, and the percentage of tax revenue used to service public debt have different trajectories. This analysis looks back 30 years to review the trends in debt servicing costs and the risks posed by such low interest rates to both the US government and investors. All years are based on the US governments fiscal year (October 1st to September 30th).

Figure 1 below shows the total public debt (commonly referred to as the national deficit) as a percentage of annual GDP. This figure is commonly used to scale the level of public debt through time. This number has doubled over the last three decades as the deficit has grown at a faster rate than GDP.

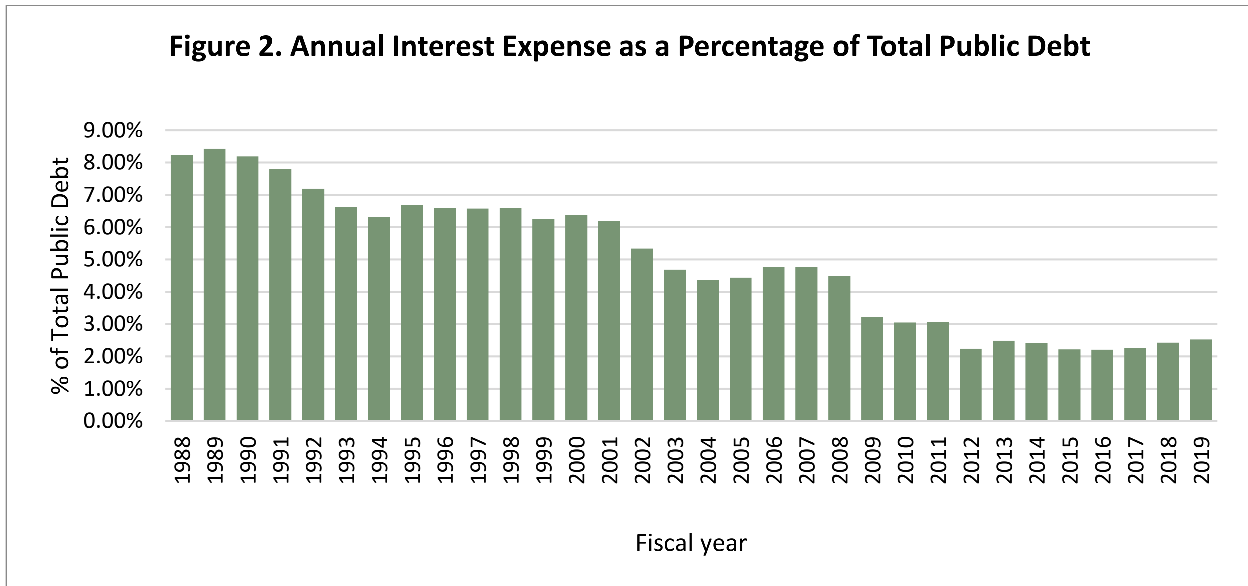


Sources: U.S. Bureau of Economic Analysis, Gross Domestic Product [GDP], retrieved from FRED, Federal Reserve Bank of St. Louis; U.S. Bureau of The Fiscal Service, Monthly Statement of The Public Debt of The United States, September 30 statement of each year; Investment Consulting Services.

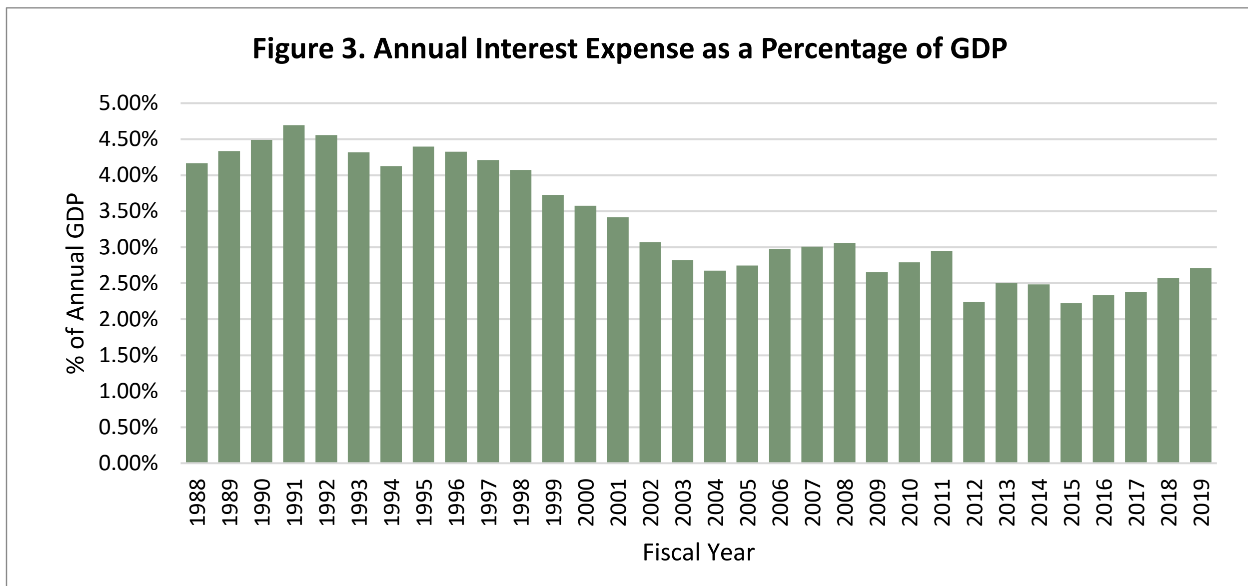
The principal balance of the US public debt is important because that amount does eventually have to be repaid or refinanced in the future. The immediate and ongoing costs of debt, the debt servicing costs or interest that is paid throughout the year, has become more manageable over time. While the public debt has grown by a multiple of 10 during the period, the cost to service the debt was only 2.7 times larger in FY 2019 ($575 billion) than it was in FY 1988 ($214 billion). This shouldn't come as a surprise as the Fed Funds Target rate has dropped from around 8% to near zero over the period. While most government debt has a yield greater

than the Fed Funds Target Rate, this rate generally anchors the short end of the curve and influences rates across the entire curve.

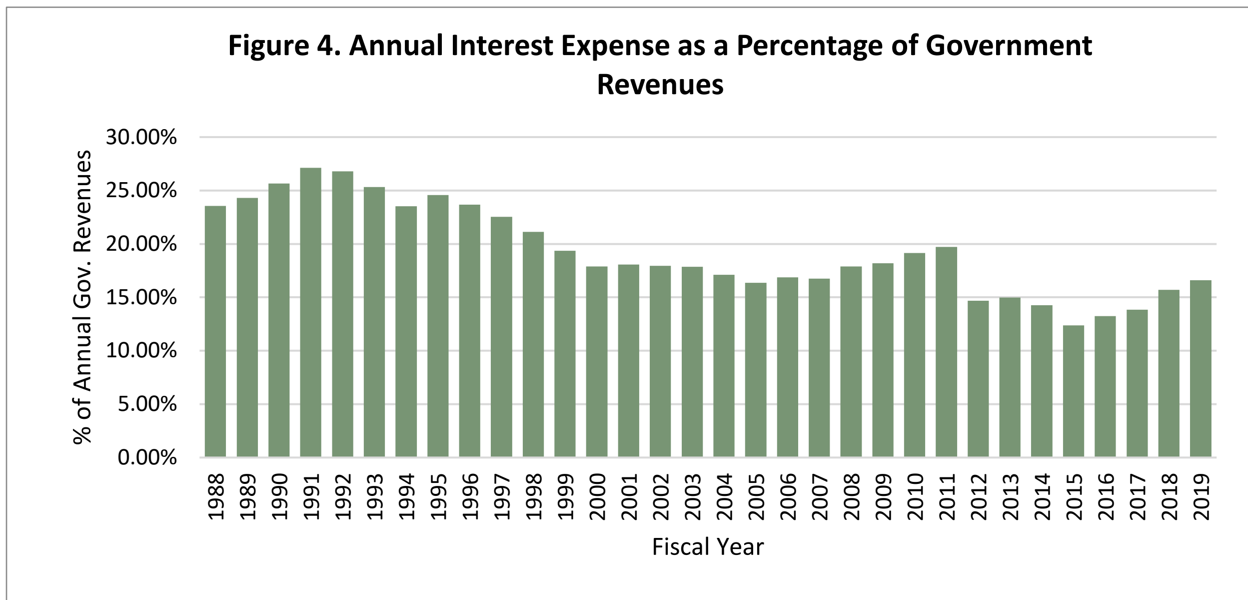
Figures 2, 3, and 4 show the annual US government interest expense as a percentage of the total public debt, GDP, and government revenues.



Sources: U.S. Bureau of The Fiscal Service, Monthly Statement of The Public Debt of The United States, September 30 statement of each year, and Treasurydirect.gov, Interest Expense on the Debt Outstanding; Investment Consulting Services.



Sources: U.S. Bureau of Economic Analysis, Gross Domestic Product [GDP], retrieved from FRED, Federal Reserve Bank of St. Louis; U.S. Bureau of The Fiscal Service, Treasurydirect.gov, Interest Expense on the Debt Outstanding; Investment Consulting Services.



Sources: U.S. Bureau of The Fiscal Service, Treasurydirect.gov, Interest Expense on the Debt Outstanding; Congressional Budget Office; Office of Management and Budget; Investment Consulting Services.

As you can see, while interest expense has increased, the cost to carry the public debt year-to-year has grown at a slower rate than GDP and government revenues. The interest expense has also fallen dramatically as a percentage of the total public debt.

The growing principal balance and the cost to service the public debt hasn't put an additional burden on government revenues because interest rates have dropped significantly over the past 30 years. There are a couple of problems that may arise going forward, now that rates are at record lows. The Fed Funds Target Rate is currently set at 0.00% – 0.25%. Although the target interest rate could technically be negative and government debt generally carries a higher rate of interest, it is debatable if the US government would actually be able to refinance existing debt and issue new bonds at increasingly lower and eventually negative rates in perpetuity to maintain the current trajectory of debt servicing costs. In the case of rising and steadily higher interest rates, the cost to service existing debt would increase as bonds mature and the cost to service the existing debt could consume a much larger portion of annual revenues in the future. Finally, as the national public debt increases, in the near zero interest rate and inflation environment, it becomes less likely that investors will be willing to accept such low coupons on long dated bonds. Although the risk of default may remain low, if inflation ticks up even slightly most recently issue debt will have a negative real yield.

While the US government faces unique risks as a bond issuer, government bond investors are also facing an increasingly risky investment landscape. With newly issued debt paying lower coupons, bond duration increases at a time when rates are already at historic lows. This increases the risk of those bonds if interest rates were to rise in the future. Another risk to such low yields is inflation risk. If inflation starts to move higher, investors will be stuck holding bonds that have increasingly more negative real yields and would likely see negative price pressure.

The risks and rewards of owning government bonds have become more asymmetrical, but not necessarily because the principal balance of the US public debt has increased. Falling interest rates over the last 30 years has helped the US government manage the annual interest expense associated with an increasing amount of public debt. Now that interest rates are at historic lows, the US Government could face an increasing burden from interest expense if revenues don't continue to grow at a faster pace than the interest payments on the debt.

Information used in this report has been obtained from sources considered to be reliable, but its accuracy and completeness cannot be assured. Opinions, estimates, projections and comments on financial market trends and events constitute Investment Consulting Services, LLC's judgment and are subject to change without notice. This material is not financial advice nor an offer to purchase or sell any product. References to specific securities are for illustrative purposes only and are not recommendations. Past performance is not a guarantee of future results.