Part 4:
Looking Ahead

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Chapter 15: What My Indicators Show

My Indicators

In making my assessments of risks, I weigh a number of factors, many of which I have described and the most important of which are shown in the following table. The table shows these indicators across major countries as of my writing this in January 2025. Though they aren't all of my indicators and they are not enough to convey the whole picture, they paint a good enough picture. Think of this table as a dashboard that paints a rough, current picture of health in order to assess central government and central bank long-term debt risks. In addition to showing risks from existing and projected debt and debt service levels, it includes measures of whether a country is a reserve currency because being a reserve currency country—i.e., having one's currency widely accepted around the world as both a medium of exchange and a storehold of wealth—is a great risk mitigator, especially if the country is a good place to invest, as is currently the case for the US and its money and debt.

By looking at the indicators in that table, you can get a pretty good picture of what a country's debt risks are. You can see that the US has very large central government debts (which is a big risk) and low liquid savings/reserves (so it has little protection from them), but its currency is the dominant world reserve currency (which is a great mitigator of the risk), which the US is undermining by a number of things it is doing (which I won't reiterate because it would be too much of a digression). From all this, you can see that its financial well-being hinges on it maintaining its existing reserve currency status. You can also see that the Japanese central government has very large debts (which is a big risk) that are denominated in its currency (which mitigates the risk) and relatively large FX reserves (which reduces the risk). You can see that China has relatively big debt (which is risky), its debt is denominated in its own currency (which is risk-mitigating), it has relatively big reserves (which is risk-mitigating), it has a currency that is not widely accepted around the world as a storehold of wealth (so there isn't much support from that), and the attraction of and usage of its capital markets by foreign investors—while it was moderately large—is falling fast (which lessens the protection it would get from having more). You can also see that Singapore, Norway, and Saudi Arabia currently have good income statements and balance sheets that have much more in liquid assets than they have in debts, and you can get that sort of picture for the other countries shown.

Assessing Central Government and Central Bank Long-Term Debt Risks

	Government Debt								Liquid Reserves		Other Health Measures		Reserve Currency Status			
	Govt Assets vs Govt Debt (% Ctry GDP)	Govt Debt (% Ctry GDP)	Govt Debt 10yr Fwd Projection (% Ctry GDP)	o/ w Held by Central Bank	o/ w Held by Other Domestic Players	o/ w Held Abroad	Significant Share In Hard Currency?	Govt Interest (% Govt Revenue)	FX Reserves (% Ctry GDP)	Sovereign Wealth Assets (% Ctry GDP)	Total Debt (% Ctry GDP)	Current Account 3yr MA (% Ctry GDP)	**World Trade** (% of Trans in Ctry FX)	**World Debt** (% External Debt in Ctry FX)	**World Equity** (% of Global Market Cap)	**World Central Bank Reserves** (% in Ctry FX)
JPN	-183%	215%	214%	92%	96%	27%	NO	8%	32%	-	486%	4%	2.6%	1.5%	4.7%	6.0%
USA	-96%	99%	122%	13%	57%	29%	NO	22%	3%	-	340%	-4%	52.6%	80.7%	65.7%	57.0%
BRZ	-70%	81%	114%	21%	52%	8%	NO	38%	11%	-	181%	-2%	0.9%	0.2%	0.4%	0.0%
GBR	-87%	92%	101%	23%	45%	24%	NO	8%	5%	-	258%	-2%	9.2%	1.5%	3.0%	5.0%
CAN	-45%	50%	53%	9%	16%	25%	NO	7%	5%	-	377%	-1%	1.8%	1.3%	2.6%	3.0%
SAF	-59%	73%	79%	1%	51%	22%	YES	18%	14%	-	139%	-1%	0.4%	0.0%	0.3%	0.0%
TUR	-22%	26%	15%	0%	16%	9%	YES	15%	4%	-	167%	-6%	0.7%	0.2%	0.1%	0.0%
EUR	-76%	85%	87%	30%	41%	14%	NO	8%	9%	-	169%	2%	15.4%	10.4%	6.5%	20.0%
CHN	-63%	90%	112%	1%	87%	2%	NO	3%	20%	7%	289%	2%	3.6%	1.0%	5.9%	2.0%
IND	-40%	56%	67%	4%	48%	3%	NO	42%	16%	-	181%	-2%	0.4%	0.3%	1.9%	0.0%
MEX	-27%	40%	36%	0%	28%	12%	YES	16%	13%	-	130%	-1%	0.8%	0.2%	0.2%	0.0%
KOR	-15%	49%	40%	1%	38%	10%	NO	5%	23%	11%	325%	3%	0.9%	0.3%	0.9%	0.0%
AUS	-21%	35%	40%	11%	8%	15%	NO	3%	4%	10%	219%	-1%	1.7%	0.7%	1.5%	2.0%
SWE	-22%	32%	26%	7%	18%	7%	NO	2%	11%	-	322%	6%	0.6%	0.0%	0.7%	0.0%
CHE	84%	15%	12%	0%	11%	3%	NO	2%	99%	-	300%	7%	1.2%	0.4%	1.9%	0.0%
NOR	383%	14%	0%	0%	6%	8%	NO	0%	17%	380%	323%	21%	0.5%	0.0%	0.1%	0.0%
RUS	19%	14%	15%	-	-	-	YES	4%	33%	-	233%	5%	0.9%	0.0%	0.1%	0.0%
SAR	94%	26%	47%	0%	16%	11%	YES	-	40%	80%	89%	5%	0.5%	0.0%	0.0%	0.0%
SGP	108%	177%	158%	2%	-	-	NO	-	84%	201%	353%	19%	0.6%	0.0%	0.3%	0.0%

Note that government debt is calculated for the central government only, except for China, where general government debt plus local government financing vehicles are used. The "sovereign wealth assets" column includes only the top 20 sovereign wealth funds globally. The figures provided for sovereign wealth don't include liquid assets controlled or influenced by the government. For example, in Japan, in addition to foreign exchange reserves held at the Ministry of Finance, there are assets held at the government's pension fund (GPIF) and the state-owned bank (Japan Post Holdings). Excluding them seems appropriate to me because if we included them, we would have to account for their liabilities—i.e., we would need to add pensions and quasi-government entities across countries (e.g., CPP, US federal employee retirement funds, etc.). For reference: if we were to count all of the foreign assets held by these entities, our measure of Japanese reserve firepower would go up significantly—a big increase but still well short of the government's 215% of GDP in debt.

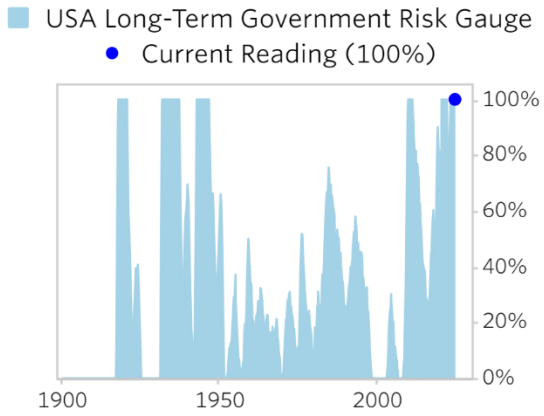
I aggregate indicators into models designed to show risks and rewards of things happening.

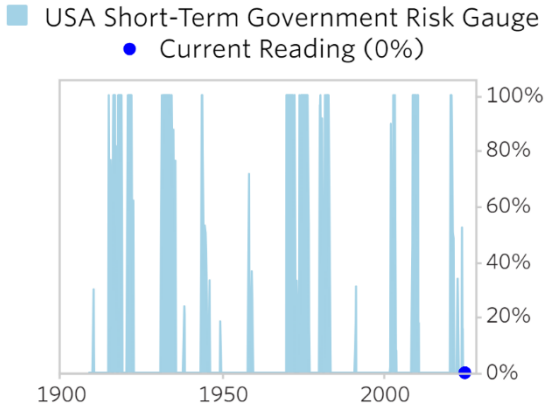
Long-Term and Short-Term Indicators of the Risks of Central Governments and Central Banks

Using those and other previously described indicators, I measure both long-term risks (which I view like measuring the long-term risks of having a heart attack) and short-term risks (like measuring the heart attack actually happening and its damage) for both central governments and central banks. While short-term risks are often due to long-term vulnerabilities becoming manifest in problems (like a person with high long-term risks of having a heart attack actually having a heart attack), this isn't aways the case. For example, a pandemic (like COVID) could happen, or a war could break out, even if the underlying long-term vulnerabilities are low, which would lead to greater short-term risks that will show up in this risk gauge rising. My measures of both the long-term and the short-term risks are shown below. Please know that while these are good indicators, they, like most leading indicators of someone having a heart attack, are very imprecise for previously explained reasons.

The US Central Government's Debt Risks

The chart below on the left shows my measure of the US government's long-term debt risks, and the one on the right shows my measure of the US government's short-term risks going back to 1900. At this time, I judge the long-term risks of US government debt to be very high because the current and projected levels of US government debt and debt service, and sales of new debt and debt to be rolled over, are the highest ever and there are big debt rollover risks ahead. In fact, I judge the US government's debt situation to be nearing the point of no return. By that, I mean that the debt and debt service levels are beyond those that can be reduced without great losses to debt investors because at such levels a self-reinforcing debt "death spiral" occurs due to the need to borrow to service debt and interest rates rising because the risks of holding the debt/currency become apparent. At the same time, I judge the short-term risks to be low because inflation and growth are relatively moderate, credit spreads are low, real interest rates are high enough for lender-creditors without being too high for borrower-debtors, and the private sector's income statements and balance sheets are in relatively good shape—good enough to tax if that is needed to help the central government's finances. However, if the demand for new debt sales and debt rollovers falls off and/or there is the selling of debt assets, that would quickly raise the short-term risk gauge. By the way, this gauge can change very quickly—e.g., overnight.





Next is a table showing some of the most important readings that feed into my long-term risk rating for the US central government. It's measured in Z-scores, or standard deviations above/below the mean. All you need to know is above 2 is quite bad.

Long-Term Risk Gauge Construction (Up = More Vulnerable)

		Reading Today
Central Government Long-Term Risk	-	2.4z
Current Borrowing Need	-	**2.4z**
Current Borrowing Need (% Revenue)	39%	2.3z
Current Borrowing Need, if Roll Problems (% Revenue)	239%	2.5z
Projected Borrowing Need	-	**2.8z**
10yr Forward Borrowing Need (% Revenue)	44%	2.8z
10yr Forward Borrowing Need, if Roll Problems (% Revenue)	254%	2.9z
Share of Debt in Own Currency	100%	**-2.0z**

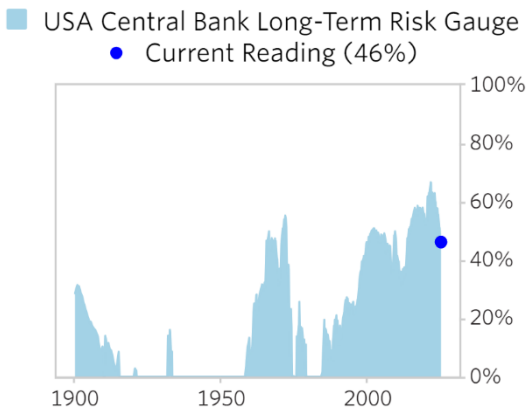
In short, it appears to me that there is a very high long-term risk of a US central government debt crisis of the sort I have been describing, but currently there is a very low imminent risk of that problem happening.

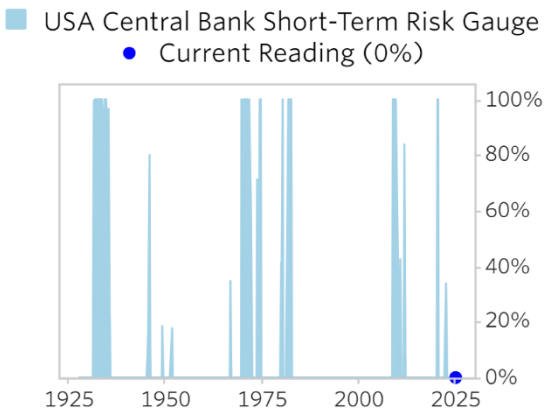
The US Central Bank's Debt Risks[1]

The following charts show my gauges of the long-term and the short-term risks of the Federal Reserve. While the long-term risk gauge is now higher than it has almost ever been because a) the amounts of government debt held by the Fed are high, b) the losses taken by the Fed are the highest they have ever been, and c) the Fed has a poor net worth, these numbers are currently not large. So right now, the long-term risk is small but is in a place where it could accelerate very quickly. And, as of now, I measure the Fed's short-term risks to be relatively low because the US economy and markets are near their equilibrium levels. More specifically, while the reading is moderately bad relative to what it was in the past, owing to a large balance sheet with little hard assets to back it up (with limited cash flow losses), it is not yet significant because the numbers remain very manageable and are nowhere near the levels that proved to be problematic for central banks in other countries in which the central bank problem became severe and led to a self-reinforcing downward spiral. Also, a) neither high and quickly rising inflation nor deflation and falling prices are a problem, b) the Fed is not actively monetizing debts but rather is slowly shrinking its debt holdings, and c) the Fed isn't encountering currency changes that are so large that they would affect inflation and growth enough to affect its monetary policy.

[1] This central bank risk gauge is based on timeless and universal principles developed from looking at many countries over long periods of time. It is based on:

1) How big the central bank's exposures are.
2) The size of the balance sheet and the size of the vulnerabilities of its cash flows to interest rate changes, with consideration given to how profitable or unprofitable the central bank is today and how unprofitable it would be if interest rates changed adversely.
3) How strong the balance sheet is, e.g., how close the central bank is to running out of reserves (i.e., the number of months the central bank could sustain the current pace of reserve sales before running out).
4) The value of the currency/ debt as a storehold of wealth. Based on logic and empirical evidence that countries' reserve currency statuses and track records of producing good outcomes make them more attractive to investors, is the country's reserve currency status based on the country's track record of producing good returns for investors?
5) The shares in this country/ currency of world reserves, world trade, world capital flows, and world capital markets.





In fact, the US economy would at this moment in time appear to be in an excellent equilibrium level judging by its levels of growth, inflation, real interest rates, and central bank debt monetizations, which can create the mistaken impression that all is now good. But all is not good because there is the government debt supply and demand picture, which we've discussed, that is growing like a cancer, and the Fed's existing balance sheet has losses that would rise, leading to its capital falling in a debt crisis. Besides increasing the financial risks, such a confluence of events would increase the risk to the Fed's independence because the Fed's actions would be put under greater political scrutiny, which, if confidence in the Fed's independence is undermined, would likely contribute to a negative reinforcing cycle because the confidence in the value of money being maintained would be undermined. At this time, we are a relatively long way from that. **The two things that we should expect not to happen, but if we see them happen should be viewed as big red flags going up that are signaling that the real value of money and debt are at great risk, are 1) another round of quantitative easing to increase liquidity and force real interest rates down and 2) the central government gaining control over the central bank.**

Next is a table showing some of the most important inputs to my long-term risk rating for the US central bank. You can see that the central bank's income statement looks not particularly bad, but the balance sheet looks about as vulnerable as it has ever been because of the large amount of money (74% of GDP) and the small amount of reserves (3% of GDP). The income statement doesn't look bad because, while the central bank is unprofitable, the magnitude is relatively small.

Also, as shown in the table, the United States is the world's dominant reserve currency, its capital markets are dominant, and the dollar has been a mediocre storehold of wealth. When I net these factors, we see the US as a good storehold of wealth, which reduces long-term risk.

Having said that, it should be noted that these supports can deteriorate very quickly as they did for prior world powers and their currencies. For a review of the declines of the British pound and the Dutch guilder before it, please reference my book *Principles for Dealing with the Changing World Order*.

Long-Term Risk Gauge Construction (Up = More Vulnerable)

		Reading Today
Central Bank Long-Term Risk	-	1.0z
Central Bank Income Statement	**-**	**0.2z**
Current Central Bank Profitability (%GDP)	-0.2%	0.1z
Central Bank Profitability If Rates Rise (%GDP)	-0.4%	0.2z
Central Bank Balance Sheet	**-**	**1.0z**
Unbacked Money (% GDP)	71%	0.3z
Reserves/ Money	-	1.5z
Months of Reserve Sales Before Running Out	-	0.0z
Currency Is Bad Store of Wealth Gauge	-	-2.0z
Reserve FX/ Financial Center	**-**	**-3.3z**
Share of Reserves in Currency	57%	-1.9z
Financial Center Status (Z)	-	-2.7z
Safety and Stability for Investors	**-**	**-0.8z**
Institutional Quality	-	-1.2z
Rule of Law (Z)	-	*-1.1z*
Internal Conflict (Z)	-	*0.3z*
Macroeconomic Track Record	-	-1.2z
Volatility of Growth (Ann)	2.2%	*-0.8z*
Volatility of Inflation (Ann)	1.4%	*-2.1z*
Long-Term GDP Per Capita Growth	1.5%	*0.0z*
History of Losses for Savers	-	1.1z
Long-Term Real Cash Return (Ann)	-1.4%	*0.7z*
Long-Term Gold Return (Ann)	9.8%	*0.8z*

Please keep in mind that these indicators only reflect the debt/financial part of the picture and not the complete picture, and that the other big forces will have a great impact on this picture as this picture will have a big impact on the other forces (e.g., the domestic conflict, the international conflict, the acts of nature, and the technology changes), so what we don't know is very large relative to what we do know.

Chapter 16: My 3%, 3-Part Solution

This chapter is a quick and easy read for those who want to get the key points without spending too much time. It also provides thoughts and numbers that those who are analytical might want to spend some pondering, so I recommend it for everyone.

I want to make this clear and easy to remember. If you keep in mind the number 3, that will help you remember that:

- **The budget deficit should be cut to 3% of GDP (from what it is currently projected to be by the CBO, about 6% of GDP), and**
- **These cuts can come from 3 sources (spending cuts, tax increases, and interest rate cuts, with interest rate cuts being the most impactful).**

If the president and those in Congress agree that they need to do that, and they agree on a bipartisan backstop approach to doing that (I will suggest an option), they will achieve the goal of greatly reducing the odds of the US government going broke.

That's it in nutshell. I will now explain.

The Picture as I See It

It appears to me that:

1) **Policy makers who are working on getting the debt issue under control (some have given up on the idea) are approaching the problem from the bottom up, by which I mean by working on which spending cuts and/or which tax increases are better than others, rather than working from the top down, by which I mean by looking at how much it will take in total to meet the goal, then looking at the three big levers that government policy makers can pull to reduce the deficit (i.e., spending cuts, tax increases, and interest rate reductions), and finally deciding which spending cuts, which tax increases, and which interest rate changes to make.**

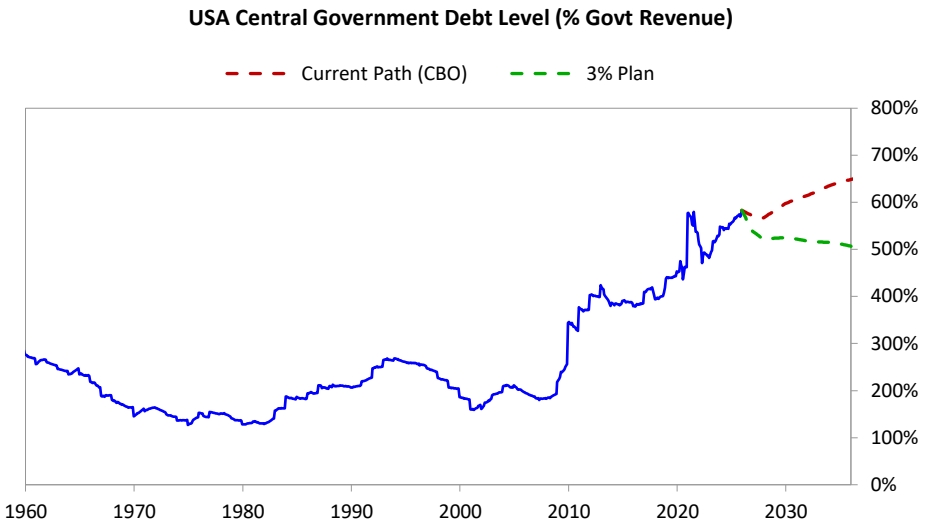
2) **Policy makers are so tied up in arguing about the particulars to get exactly what they want that they have made the likelihood of a disastrous outcome—either not limiting the debt or having a bad government shutdown—much greater than the likelihood of an attainable good outcome.**

To tackle this problem, I believe that they should 1) work from the top down, by which I mean agree on the size of the cuts to the deficit and the size of the deficit as a percentage of GDP that need to be made to stabilize the debt and 2) agree on a fallback plan that achieves the necessary budget cuts that would automatically happen if they can't reach agreement on the particulars. This fallback plan could be something like equal percentage cuts to all spending that can be cut and equal percentage increases on all taxes that can be increased so that combined they will achieve the goal if they can't agree on anything else, so they will be assured of having a deal. Then, they can go on to try to create a plan that they can agree is better than that one. I will now propose a fallback plan that policy makers should be able to agree on.

What My 3%, 3-Part Solution Looks Like

The following chart shows the US debt level as a percentage of government revenue. The current debt trajectory is shown with the red dashed line, and based on how I understand the mechanics to work and on indicators of what is most likely to happen, it appears to me that to prevent the central government from going broke, policy makers have to change the government debt level trajectory to the green dashed line. Changing that trajectory will require some cut in spending, and/or some increase in tax revenue, and/or some cut in the interest rate on the debt such that these three moves in total will add up to cut the deficit to bring it down to 3% of GDP. Such a deficit cut would lead to the debt burden being about 17% lower in 10 years than it would be if the US were to continue on its currently projected path (which amounts to debts being $9 trillion lower in 10 years). In 20

years, the 3% solution path would make government debt 31% lower, which is $26 trillion lower. Doing that would greatly reduce the risks of the central government, those who are lending to it, and all those who would also be affected by a big debt issue from suffering a "heart attack."



In Chapter 3, I showed that there are three main types of levers that can be pulled to control the deficit, and I showed tables that conveyed the effects of pulling them. To achieve the goal of stabilizing debt relative to income, it would take about an 11% increase in taxes, about a 12% cut in spending, or about a 3% cut in interest rates, all else equal, if just one lever were used alone. Of course, any one of these numbers alone is way too large, so managing the adjustment will require a good combination of two or three of them.

Let's look more closely at those numbers, which are interesting because they show how much more powerful a change in interest rates would be than a change in taxation. For instance, interest rates falling by 1% is about four times more effective at reducing the debt-to-income ratio over the next 20 years than a 1% increase in tax revenue. **The numbers also show how much more powerful a change in taxation would be than a change in spending**—a 1% increase in tax revenue is 1.2x more effective than a 1% reduction in spending over that same time frame. But these estimates of the direct effects understate what the total effects are likely to be after accounting for the likely secondary effects. More specifically, a cut in interest rates is even more powerful than the estimate I gave you because, besides lowering government debt service payments, interest rate cuts would boost asset prices, which would raise capital gains tax receipts and be stimulative to the economy, and raise inflation, which would raise tax revenues. It's also worth noting that 1) the second-order effects of cutting spending would be negative for economic activity and thus negative for income taxes and 2) the second-order effects of raising taxes would also be negative because of the reduction in spending and economic growth.

In other words, there are two important takeaways. First, the biggest influence on the government's deficit is ironically not Congress, which determines spending and taxes—it is the Federal Reserve, which determines interest rates. Second, while trimming the budget deficit and cutting interest rates both reduce the debt problem, they would have offsetting effects on economic growth, inflation, and taxes. This means that if these actions are balanced well, the budget deficit can be reduced significantly without creating unacceptable effects on the economy.

Given that, if I were deciding for the president and/or Congress, I would want the Federal Reserve to lower the interest rate. I expect that the president and Congress will pressure the Fed to do that, but, of course, Congress and the president don't determine what the Fed does. **If I were on the Federal Reserve board, I would be willing to work with the president and Congress to implement such a plan because a fiscal tightening** (which would have the first-order effects of reducing the deficit and being a negative for economic growth and inflation) **in conjunction with a monetary easing** (which would also be deficit-reducing while being positive for economic growth and inflation) **looks like a great plan. It is obvious that a fiscal tightening with a monetary easing would be a good thing.** In fact, if Congress and the president enacted a significant deficit reduction, it would trigger a rally in bonds and a decline in interest rates that would help reduce the deficit. Some people worry about a cut in the fiscal deficit of that size being too negative on the economy, but that's not my worry because if the fiscal tightening were too negative on growth and inflation, it would trigger a monetary easing to rectify that. **So, what's the problem with cutting spending and raising taxes other than the political problem of anger from those who are getting less money from spending or who are paying more in taxes? I don't see it.**

A fiscal tightening with a monetary easing makes financial and economic sense because the biggest imbalance that now exists that should be rectified is between the central government's finances (it has dangerously too much debt and too much borrowing) and the private sector's finances (which are in relatively good shape, particularly in the booming areas of the market and the economy). This state of affairs came about because the Fed helped to fund the large budget deficits that allowed the big spending and the central government's debt problem to happen in the first place. So, the Fed cooperating to negate whatever pain that might come as a result of a large (3% of GDP) deficit cut would make sense, especially since the private sector has received lots of deficit-funded support, is now in pretty good shape, and could use some fiscal tightening, which the Fed could help manage with its monetary policy. It would bring the private and public sectors' finances into better balance.

Who would suffer from the lower interest rate? While bond holders will get a lower real yield, they would benefit from interest rates falling because bond prices would go up, plus they would get a safer bond. The world would celebrate such an accomplishment, both because of the reduced US government debt risk and because it would demonstrate that the American political system can work well to solve at least this big problem. Also, other major markets like equities would benefit from those changes. So, just about everyone other than special interest groups should like the immediate effects of this plan.

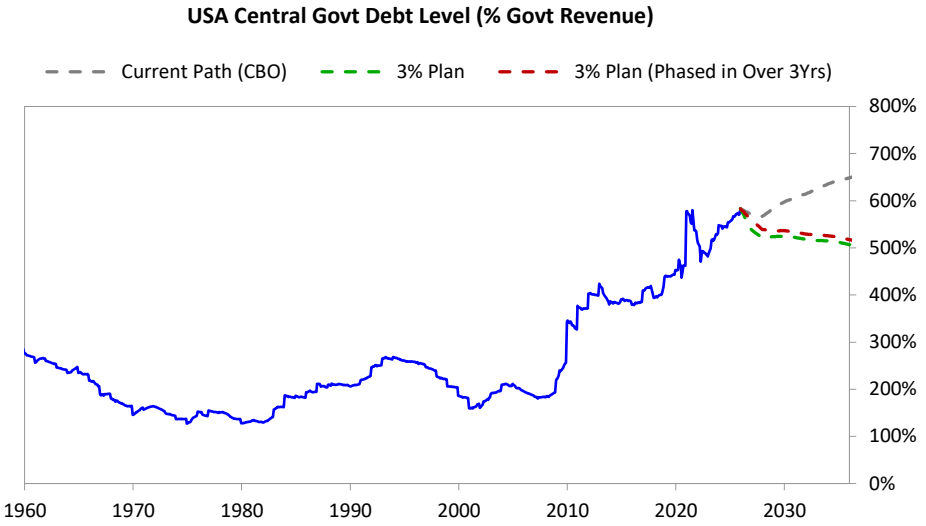
Let's now play around with the numbers and these three levers to see what specific changes could get the 3% of GDP deficit goal achieved by making the adjustments come roughly equally from spending cuts, taxes, and interest rate cuts. That would take about a 4% cut in spending, a 4% increase in taxes, and a 1% cut in real interest rates. That way, they would spread out where they get the 3% of GDP from so it's not too big for anyone, it is pretty politically agnostic, and the depressing fiscal effects would be offset by the stimulative monetary effects of the real interest rate cuts. That would be my solution to the problem with one possible modification: because those amounts of cuts in spending and increases in taxes would cause abrupt changes, I would phase these changes in over three years. As mentioned, I would try to make that a bipartisan fallback position to use if no other solution is reached because everyone would be relieved if policy makers could agree on an acceptable plan and negotiate the tweaks to it.

What If the Fed Doesn't Go Along with This?

Of course, the Fed can't openly say that it will go along with this plan (though deals between the Fed keeping interest rates low while the government was cutting the deficit have been made in the past), so let's look at the possibility that Congress and the president will have to make the changes come only from spending cuts and raising tax revenue by the same percentages. That percentage would be about 6% (i.e., cutting spending by 6% and raising taxes by 6%), which would also equal about a 3% of GDP deficit reduction. While those amounts of adjustments would be large by historical standards, I know that they can occur without problems if balanced well and I know that if they are too depressing to economic growth, the Fed will respond by lowering interest rates because that's what the central bank does when the economy and inflation are too depressed. **For these reasons I know that if this 3%, 3-part plan is followed it would be worlds better than if it is not followed.**

My Proposed Deficit Cut Compared with Past Deficit Cuts

While many will say that these changes are draconian, my study of past deficit cuts leads me to believe that they are very manageable if monetary policy is managed sensibly at the same time. Phasing in that plan and assuming the Fed will run monetary policy sensibly would lead to the adjustment looking something like what is shown in the red dashed line, which is very close to the original 3% plan.



However, I need to point out a fly in the ointment. As mentioned, the numbers I showed are based on the bipartisan Congressional Budget Office's numbers. These numbers are based on the existing plan for the Trump tax cuts to roll off so, if they are extended as President Trump has promised to do, the deficit will be larger by an estimated 1.5% of GDP, so the deficit cut will have to be over 4% of GDP rather than about 3% to stabilize government debt-to-income.

While such a budget deficit cut is large, it's not very large by historical standards. The following table lists all major fiscal policy tightenings in all countries going back to 1960. It shows that big fiscal tightenings (3% of GDP or even much larger) went well if put into place when 1) growth was strong, 2) the monetary-currency policy was easy, and 3) debts were in currencies that the central bank could print. Notably, the fiscal tightening in these cases helped to lower bond yields, which reduced interest costs on the debt and encouraged private sector activity that raised taxes, and to the extent the fiscal tightening weakened the economy more than desired, it led to monetary easings that negated the fiscal tightening effects on the economy. The most successful US case of cutting the budget deficit happened in the 1992-98 period, which took the deficit from 4% of GDP to a surplus of 1% of GDP (a 5%-of-GDP improvement) over those seven years, which would be like cutting the deficit by $1.5 trillion today. My plan would cut the deficit by much less than that amount.

My timeless and universal principle about this is:

When there are large government debts that are growing quickly so that large cuts to budget deficits are needed, the most important things to do are to 1) cut the deficit by enough to rectify the problem, 2) cut the deficit when economic conditions are good so the cuts are counter-cyclical, and 3) have monetary policy be stimulative enough to keep the economy strong in the face of such cuts.

Cases Where Significant Fiscal Adjustments Were Made

Case Description				Fiscal Outcomes			Macroeconomic Outcomes (Average Over Adjustment)					Determinants Of Economic Outcomes			
Country	Start	End	Length	Chg In Prim Struct Dfct (% GDP)	Share From Revenue Increases	Share From Primary Spending Cuts	Growth vs Potential	UERate vs 10yr Avg	Slack	Inflation vs Target*	Avg Bond Yield vs Starting Level	Did Country Have Significant Hard Currency Debts?	Did Fiscal Changes Occur Into Strong Domestic Or Global Economy?	Did Fiscal Changes Coincide With Or Produce Easier Financial Conditions?	Did Fiscal Changes Include Or Coincide w/ Big Productivity Enhancing Reforms?
Median (All Cases)			4.0	5.7%	59%	41%	-0.3%	1.0%	-1.1%	-0.2%	-0.6%	10 of 40 Cases	17 of 40 Cases	25 of 40 Cases	23 of 40 Cases
Median (Painless)			5.0	5.4%	59%	41%	0.9%	0.4%	-0.5%	-0.5%	-1.2%	0 of 21 Cases	17 of 21 Cases	17 of 21 Cases	10 of 21 Cases
Median (Painful)			4.0	6.3%	54%	46%	-2.3%	2.6%	-1.7%	0.4%	0.6%	10 of 19 Cases	0 of 19 Cases	8 of 19 Cases	13 of 19 Cases
Painless Cases															
BEL	1982	1987	6	10.6%	--	--	-0.3%	0.8%	-1.8%	1.6%	-3.4%	NO	NO	YES	NO
ITA	1990	1997	8	10.4%	100%	0%	-0.5%	0.9%	-0.1%	0.2%	-2.7%	NO	YES	YES	YES
SWE	1993	2000	8	10.2%	100%	0%	1.1%	3.6%	-1.6%	-0.2%	-2.7%	NO	YES	YES	YES
DNK	1983	1986	4	9.6%	100%	0%	--	0.6%	--	--	-6.6%	NO	NO	YES	NO
IRE	1987	1989	3	7.9%	0%	100%	--	2.6%	-1.8%	-1.4%	-3.2%	NO	NO	YES	NO
NOR	1993	1997	5	7.3%	2%	98%	2.9%	0.7%	-1.0%	-2.5%	-2.2%	NO	YES	YES	NO
CAN	1994	1997	4	7.2%	21%	79%	0.9%	0.1%	-1.2%	-0.2%	0.9%	NO	YES	YES	NO
GBR	1994	2000	7	6.0%	54%	46%	1.3%	-1.5%	0.0%	-1.1%	0.6%	NO	YES	YES	YES
NLD	1996	2000	5	5.8%	6%	94%	1.8%	-1.2%	0.8%	-0.4%	-0.7%	NO	YES	YES	YES
AUS	1986	1988	3	5.6%	--	--	0.8%	0.4%	0.8%	3.9%	-2.1%	NO	YES	YES	YES
IND	2003	2007	5	5.4%	85%	15%	2.0%	--	-1.1%	-0.6%	0.8%	NO	YES	YES	NO
JPN	1979	1985	7	5.3%	79%	21%	0.9%	0.5%	-0.3%	-1.0%	1.8%	NO	YES	NO	YES
USA	1993	1998	6	4.9%	59%	41%	1.2%	-0.7%	-0.4%	-1.2%	-0.5%	NO	YES	YES	YES
CAN	1986	1990	5	4.8%	44%	56%	-0.1%	-1.0%	2.1%	-0.3%	0.4%	NO	YES	NO	NO
BEL	1993	1998	6	4.4%	--	--	-0.1%	0.9%	-1.2%	-1.4%	-1.2%	NO	NO	YES	NO
PHP	2003	2006	4	4.2%	--	--	0.7%	--	-0.5%	-0.2%	-1.3%	NO	YES	NO	NO
AUS	1994	1999	6	4.0%	100%	0%	1.2%	-0.4%	-0.3%	-0.2%	0.8%	NO	YES	NO	YES
SWE	1984	1989	6	4.0%	60%	40%	1.6%	-0.6%	1.7%	1.5%	-0.4%	NO	YES	YES	NO
PLD	2011	2014	4	3.8%	0%	100%	0.0%	-1.7%	-1.1%	-1.3%	-1.4%	NO	YES	YES	YES
FRA	1994	1999	6	3.8%	29%	71%	0.4%	1.1%	-1.6%	-1.6%	0.4%	NO	YES	YES	NO
TLD	2002	2005	4	2.8%	79%	21%	2.1%	-0.6%	0.4%	-1.2%	-1.2%	NO	YES	YES	YES
Painful Cases															
GRC	2010	2014	5	16.6%	82%	18%	-6.8%	10.2%	-5.1%	-2.1%	8.1%	YES	NO	NO	YES
IRE	2011	2014	4	10.6%	4%	96%	0.9%	5.3%	-5.5%	-1.8%	-3.4%	YES	NO	NO	YES
GRC	1990	1994	5	10.0%	100%	0%	-1.2%	1.0%	0.0%	11.6%	--	NO	NO	NO	NO
ESP	2010	2014	5	9.8%	14%	86%	-2.9%	9.4%	-4.1%	-1.2%	0.6%	YES	NO	NO	YES
HUN	2007	2009	3	9.0%	26%	74%	-5.2%	1.7%	1.7%	-0.7%	1.3%	YES	NO	NO	NO
PRT	2011	2014	4	8.8%	68%	32%	-2.8%	4.7%	-4.0%	-0.7%	1.1%	YES	NO	NO	YES
PRT	1981	1984	4	8.6%	100%	0%	-2.4%	2.6%	-1.3%	18.8%	1.4%	NO	NO	NO	NO
NZL	1987	1994	8	8.3%	100%	0%	-0.9%	2.6%	-2.3%	2.3%	-5.4%	NO	NO	YES	YES
DEU	1996	1999	4	6.9%	47%	53%	-0.7%	1.6%	-0.7%	-1.5%	-0.8%	NO	NO	YES	YES
ARG	2024	2024	1	6.3%	0%	100%	--	--	-1.6%	230.6%	-6.0%	YES	NO	YES	YES
ARG	2001	2004	4	6.1%	88%	12%	-2.8%	2.6%	-10.4%	5.5%	37.9%	YES	NO	NO	NO
ESP	1992	1997	6	5.1%	76%	24%	-0.7%	1.4%	-1.6%	-0.1%	-1.5%	NO	NO	YES	YES
HUN	2012	2012	1	4.2%	61%	39%	-3.3%	2.7%	-5.6%	-1.6%	-2.1%	YES	NO	YES	NO
HUN	1996	1996	1	4.1%	--	--	-2.2%	--	-1.7%	18.1%	--	NO	NO	YES	YES
DEU	1992	1994	3	3.4%	0%	100%	-1.9%	0.7%	0.6%	1.8%	-1.0%	NO	NO	YES	YES
NLD	1981	1983	3	3.2%	39%	61%	-2.4%	5.8%	-3.4%	0.4%	-0.2%	NO	NO	YES	YES
TUR	2000	2001	2	3.1%	0%	100%	-10.3%	2.4%	-5.8%	47.9%	0.9%	YES	NO	NO	NO
ITA	2011	2012	2	2.9%	100%	0%	-1.8%	1.9%	-0.1%	0.3%	0.6%	YES	NO	NO	YES
MEX	2015	2017	3	2.5%	45%	55%	-0.7%	-0.7%	1.7%	0.4%	0.6%	NO	NO	NO	YES

*Before inflation targets were adopted, we use the trailing 10-year average inflation rate, bounded between 4.5% and 1.5%.

More Specifically, What Expenses Should Be Cut and What Taxes Should Be Raised?

While I am tempted to get into what I believe are the relative merits of the different specific types of spending cuts, tax increases, and interest rate cuts, I'm not going to do that because I don't think there is any reason that my preferences should matter.[2] It also would be too big of a digression and would lead to all sorts of arguing with all sorts of people who have different preferences. The problem of all sorts of people having all sorts of preferences that they will fight for and not being able to resolve their disagreements is to me the biggest problem that we face—i.e., as a country and a civilization which is that there is so much arguing over the exact ways to prevent the disaster that it won't be prevented. That's why I am recommending the equal and proportionate cut in spending and increase in taxes as the fallback plan if no other plan can happen. Then, once that is in place, as has been proposed in the past, they could authorize a bipartisan fiscal commission to examine the debt issue and propose specific alternatives that are preferable to the fallback plan. But frankly, I don't care exactly how congressional policy makers do it nearly as much as I care that they do it.

Nonetheless, let's look at the constraints that must be considered.

A selection of highly impactful potential spending cuts and tax increases and their impacts are shown in the following table. This is a list of items that came primarily from the bipartisan Congressional Budget Office that most policy makers refer to. Looking at that list tells me that tweaking existing spending programs and taxes in moderate, tolerable ways could achieve the 3% of GDP deficit goal without unacceptable pain. This list also shows the revenue that can be brought in by tariffs (which during many periods of history have been a greater source of government revenue than anything else). According to the CBO, 10% tariffs on all imports could bring in about 0.6% of GDP. Also, if Elon Musk's claim that he can cut the budget deficit by $2 trillion is half true (i.e., if DOGE can cut the budget deficit by $1 trillion), that would be 3% of GDP. There are several other radical changes and considerations on the table so I'm confident that one way or another they can make it, and I like some of the aspirations as I'm all in favor of radically improving the efficiency of the government and the economy. So, it's not hard for me to imagine how a pragmatic "grand bargain" between reasonable Republicans and Democrats could be reached. My only question is whether the people involved will operate together logically to do sensible things.

Now is the time for policy makers to put up or shut up. To be clear, whatever form of grand bargain cuts the deficit to about 3% of GDP is good with me. That leads me to conclude that <u>if our representatives in Washington don't get a debt limit deal done, it will be because of their lack of reasonableness and their inability to compromise—not because a good, workable plan is beyond their reach. Because the failure to reach an agreement will produce a much bigger problem than reaching an agreement along the lines of my 3% solution, it seems to me that the electorate should hold their representatives in Congress accountable to get a debt limitation deal done.</u>

[2] Because my goal would be to raise broad-based productivity, I would a) make sure that spending cuts and tax changes not hurt those who can least afford them and not hurt high-productive functions like education that are shown to be most effective in increasing broad-based productivity and b) cut taxes and regulations in areas that would free up productive spending and improve efficiency where possible.

In the following table are some of the choices and their effects on the budget deficit, which were put out for informational purposes mostly by the Congressional Budget Office. I am sharing them simply to convey a picture of the alternatives.

Sample of Options for Reducing Deficits Through Spending Cuts

"3% Plan" Target Reduction in Spending = ~1% of GDP

	Savings over 10 yrs	Est. Annual Savings	Est. Deficit Impact	Share of Target Cuts*
Cutting Government Benefits that Go to High Earners	**$Bln**	**$Bln**	**%GDP**	
Phase Out VA Disability Payments that Go To High Earners	384	38	0.10%	10%
Decrease Social Security for Higher Income People (5yr Phase In)	197	20	0.05%	5%
Limiting Entitlements & Transfers				
Lower Implicit Subsidies for Medicare Advantage Plans	489	49	0.13%	13%
Overall Cap on Federal Spending for Medicaid, Adj. for Inflation	459	46	0.12%	12%
Eliminate Federal Farm Subsidies	311	31	0.08%	8%
Uniform Social Security Capped @ 150% of Federal Poverty Level	283	28	0.08%	8%
Use Chained Inflation for Social Security and Mandatory Programs	278	28	0.07%	7%
Limit Transfers to States & Health Providers for Medicaid	241	24	0.06%	6%
Raise Full Retirement Age for Social Security 67 to 70 (Phased)	95	9	0.03%	3%
Reduce Payments for Medical Education at Teaching Hospitals	94	9	0.03%	3%
Reducing Discretionary Spending				
Limit military manpower to ~1 million people (<20% reduction)	1118	112	0.30%	30%
Rescind Inflation Reduction Act Climate and Energy Provisions	1045	105	0.28%	28%
Limit Annual Non-Defense Spending Growth to 1.5%	592	59	0.16%	16%
Reduce Highway & Education Transfers to States By 33%	406	41	0.11%	11%
25% Reduction in Diplomatic Programs, Health + Military Aid	187	19	0.05%	5%
Total Potential Savings From Spending Cuts	**6,179**	**618**	**1.67%**	**167%**

Sample of Options for Reducing Deficits Through Tax Increases

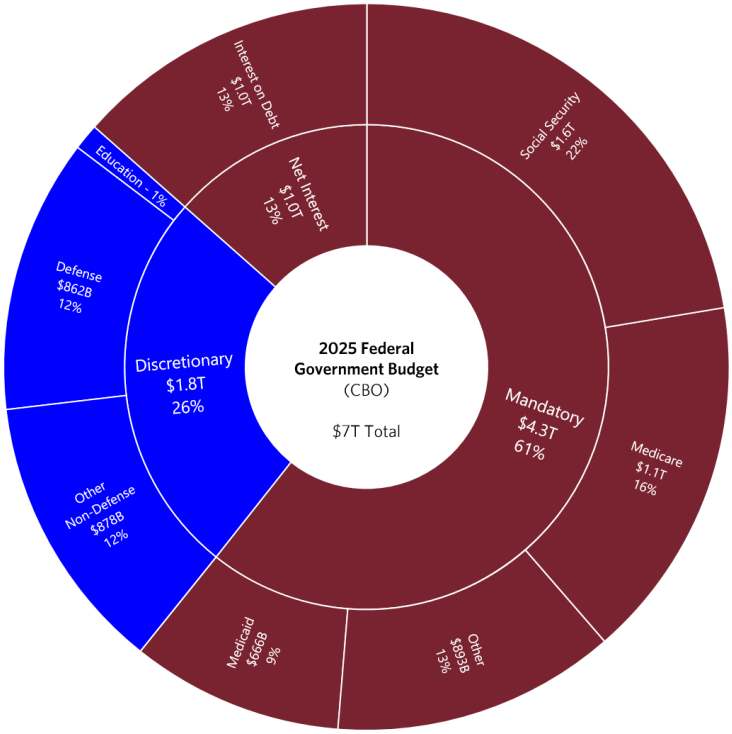
"3% Plan" Target Increase in Revenue = ~1% of GDP

	Savings over 10 yrs	Est. Annual Savings	Est. Deficit Impact	Share of Target New Revenue*
Tax Increases Targeted at High Earners	**$Bln**	**$Bln**	**%GDP**	
Apply Social Security Taxes to Incomes over 250,000	1427	143	0.38%	38%
2% Increase in Income Tax Rates for 4 Highest Brackets	570	57	0.15%	15%
Impose Net Investment Income Taxes on Business Income	420	42	0.11%	11%
Lower Contribution Limits on IRAs and 401ks	187	19	0.05%	5%
Increase Medicare Part B Premiums for High Income People	72	7	0.02%	2%
Remove Deductions & Tax Subsidies				
Cap Tax Benefits of Itemized Deductions to 4% of Income	736	74	0.20%	20%
Cap Ability to Pay Pre-Tax for Employer Health Insurance	521	52	0.14%	14%
Eliminate Mortgage Interest Deduction	349	35	0.09%	9%
Include Veteran's Disability Payments in Taxable Income	235	23	0.06%	6%
Remove Step-Up in Basis on Inherited Assets with Capital Gains	197	20	0.05%	5%
Remove Tax Credits for Post-Secondary Education	130	13	0.04%	4%
Other Increases in Taxes				
5% VAT Tax (Ex-Necessities like Food and Healthcare)	2180	218	0.59%	59%
Enact 10% Tariffs on all Imports to the U.S.	2100	210	0.57%	57%
Enact 60% Tariffs on all Chinese Imports	700	70	0.19%	19%
Tax on Greenhouse Gases ($25 per Ton Emissions), Ex-Gasoline	700	70	0.19%	19%
Remove Tax Exemptions on U.S. Corporations' Foreign Income	340	34	0.09%	9%
Increase Tax on Financial Transactions from 0.002% to 0.01%	297	30	0.08%	8%
Require Half of Advertising Expenses to be Amortized Over 10 Yr	177	18	0.05%	5%
Increase Corporate Income Taxes by 1%	136	14	0.04%	4%
Uniform Alcohol Tax of $0.25 oz of Pure Alcohol, Indexed	102	10	0.03%	3%
Raise Taxes 2% on Long Term Capital Gains/ Qualified Dividends	103	10	0.03%	3%
Total Potential Revenue From Tax Increases	**11,678**	**1,168**	**3.15%**	**315%**

**Share of Target figures shown against a target of roughly 1% of GDP improvement in the deficit from each lever.*

Sources: CBO, Joint Committee on Taxation, Penn Wharton Budget Model

In considering which spending to cut, when one looks at the possibilities, one quickly notices that about 70% of the non-interest spending is considered "mandatory"—i.e., it is either contractually required or politically nearly impossible to cut. The breakdown is shown in the following chart.



That said, in the "mandatory" spending part of the budget, there are a number of relatively modest changes that could have big impacts. For instance, two changes to Social Security (phasing in an increase to the retirement age from 67 to 70 and using a more realistic inflation measure to calculate the increase in benefits), which wouldn't affect virtually anyone immediately, would produce about a tenth of the required spending cuts.

The roughly 30% of spending that is "discretionary" that Congress has to reauthorize every year (which is shrinking fast as a share of spending because entitlement programs are growing) **includes defense spending (which is over half of the discretionary budget), veteran medical care, rental assistance for low-income households, funding for transportation, medical and scientific research, education transfers to states,** and hundreds of other functions of the government. **Because a bill needs to be passed every year to authorize this spending, these are the easiest to cut (though they have not been cut). If you cut just from these "discretionary" items to achieve the goal of cutting spending by about 4%, that would require 15% cuts in these on average. I find the distinction between discretionary and non-discretionary spending to be a bit arbitrary because cuts can be made from both. The important thing is getting to a reasonable mix that adds up to a deficit reduction of 3% of GDP to get the deficit down to 3% of GDP.**

Do It Now! Do It Counter-Cyclically!

To re-emphasize: When there are large government debts that are growing quickly so that large cuts to budget deficits are needed, the most important things to do are to 1) cut the deficit by enough to rectify the problem, 2) cut the deficit when economic conditions are good so the cuts are counter-cyclical, and 3) have monetary policy be stimulative enough to keep the economy strong.

Now is an exceptionally good time to implement a significant debt limit plan because:

- It is much better to reduce government deficits in good economic times than to wait for a debt crisis to happen in bad times.
- The US economy is near full employment, growth is moderately strong, inflation is a bit high, and the private sector's income statements and balance sheets are in pretty good shape (mostly because the government took on the burden, which it probably should shift at least some of back).
- If the plan is not implemented now, the debt problem will grow so it will be more difficult to deal with. That is especially true because the debt cycle is now at the stage in which borrowing and more debt are needed to service existing debts, so they are increasing in a self-reinforcing and compounding way.

Implementing this plan now would be a confidence booster that would have all sorts of beneficial knock-on effects. **It's also worth noting that there are other, less-commonly discussed ideas out there that could have a big impact on the debt picture. I'm in favor of marking the government's assets to market, creating a US government sovereign wealth fund, and exploring a US-backed stablecoin if these things can be done well. Imagine if the government's assets were managed economically—e.g., if they were valued, bought, sold, and/or developed economically rather than not even looked at economically as is the case now, and imagine there was a well-funded, well-run sovereign wealth fund behind the government's financing and debt. That's an interesting subject for another time.**

In concluding this chapter, I want to reiterate that even with the best of budget plans, there are very big uncertainties that can throw them off. For example, we don't know if there will be wars that will cost more and worsen the budget deficits, or if there will be bigger-than-expected productivity gains from new technologies that will produce higher incomes and tax revenues that will reduce budget deficits. There are many such uncertainties that will undoubtedly disrupt these projections, so the ranges of possibilities around them are large. **To me, that suggests that US policy makers should be more, not less, conservative in dealing with the government's finances because the worst thing possible would be to have its finances in bad shape during difficult times.**

Appendix to Chapter 16: Looking in More Detail at the Effects of Different Spending, Tax, and Interest Rate Changes on the Deficit in the US

Achieving the goal of stabilizing government debts relative to government revenues is kind of like playing with a Rubik's Cube, in that changing one lever changes the impact of all the others. The following tables show how different combinations of government spending cuts, tax increases, and interest rate changes would lead to different outcomes for the government's debt-to-income ratio.

The first table shows the status quo—what the US government debt picture looks like in 20 years if there are no changes in revenue, spending, or real interest rates from those now projected by the Congressional Budget Office. In that baseline scenario, US government debt will reach over 130% of GDP in 20 years. However, it's important when doing these calculations to compare debt levels to tax revenue, not nominal GDP. GDP is often used by default, but that can be misleading because levels and changes in tax revenue can be very different from levels and changes in GDP. When dealing with government finances, what matters are the revenues and expenses of the government. Translating this projection into a share of government revenue, the US is projected to reach debt that is 7.2x government income, up from about 5.8x right now.

To give you a sense of how the different pieces interact, I show in the following table how this projection would change as the government changes its spending (x-axis, with spending declining as you move to the right) and/or revenues (y-axis, with taxes rising as you move down). **This grid shows how challenging it is to stabilize the debt if lower real rates are not part of the solution—it requires relatively large cuts in spending and increases in revenue.**

Govt Debt-to-Income in 20 Yrs **Assuming CBO Interest Rates**

Current Debt/ Income = 583%, Baseline Primary Deficit = 12% of Income (CBO)

% Chg in Govt Income \ % Change in Government Spending	6%	3%	0%	-3%	-6%	in % GDP Terms
-6%	1014%	947%	882%	818%	755%	-1.0%
-3%	929%	864%	801%	739%	678%	-0.5%
0%	847%	784%	723%	662%	603%	0.0%
3%	768%	707%	648%	589%	532%	0.5%
6%	693%	634%	576%	519%	463%	1.0%
in % GDP Terms	1.2%	0.6%	0.0%	-0.6%	-1.2%	

Current path

In the following tables, I show the same sensitivity if real interest rates fell by 1% or 2% (i.e., if they end up roughly 1.5-2.5% below real growth rates). These grids help you see the impact of different policy mixes.

Govt Debt-to-Income in 20 Yrs **if Real Interest Rates Fall 1%**

Current Debt/ Income = 583%, Baseline Primary Deficit = 12% of Income (CBO)

% Chg in Govt Income \ % Change in Government Spending	6%	3%	0%	-3%	-6%	in % GDP Terms
-6%	831%	773%	717%	661%	607%	-1.0%
-3%	782%	724%	668%	612%	558%	-0.5%
0%	732%	674%	618%	563%	508%	0.0%
3%	681%	624%	567%	512%	457%	0.5%
6%	629%	572%	515%	460%	405%	1.0%
in % GDP Terms	1.2%	0.6%	0.0%	-0.6%	-1.2%	

Govt Debt-to-Income in 20 Yrs **if Real Interest Rates Fall 2%**

Current Debt/ Income = 583%, Baseline Primary Deficit = 12% of Income (CBO)

% Chg in Govt Income \ % Change in Government Spending	6%	3%	0%	-3%	-6%	in % GDP Terms
-6%	725%	672%	620%	569%	519%	-1.0%
-3%	680%	627%	575%	524%	474%	-0.5%
0%	634%	581%	529%	478%	428%	0.0%
3%	587%	534%	482%	431%	381%	0.5%
6%	540%	487%	435%	384%	334%	1.0%
in % GDP Terms	1.2%	0.6%	0.0%	-0.6%	-1.2%	

The following table shows how much of each lever you'd need to pull on its own. For instance, just cutting discretionary spending would require nearly 50% cuts to those programs, while just cutting interest rates on the government debt would require them to fall by around 3%. That's why I like my "3% solution"—because it spreads the adjustments across the levers.

How Can the US Stabilize Debt-to-Income in the Next 10 Years?

Central Government Debt Today (% GDP)	100%
Central Government Debt Today (% Revenue)	583%
Proj Debt in 2035 (% GDP, CBO)	118%
Proj Debt in 2035 (% Revenue, CBO)	648%
Proj Nominal Growth Rate (CBO)	3.9%
Proj Real Growth	*1.9%*
Proj Inflation	*2.0%*
Proj Effective Nom Interest Rates (CBO)	3.5%
Current Interest Rate (Avg 3m and 10yr)	*4.5%*
If Lower Interest Rates Were the Only Lever…	
Interest Rate Required to Stabilize Debt	1.0%
Change in Interest Rates vs Current Interest Rate	*-3.5%*
Change in Interest Rates vs CBO's Projected Avg Interest Rate	-2.5%
If Higher Inflation Were the Only Lever…	
Required Inflation Rate to Stabilize Debt	4.5%
Change in Inflation Required (vs Current Proj Inflation)	2.5%
If Cutting Expenses Were the Only Lever…	
% Spending Cut Required to Stabilize Debt	12%
% of Discretionary Spending	47%
If Raising Tax Revenue Were the Only Lever…	
% Revenue Increase Required to Stabilize Debt	11%

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