The US Federal Debt

OLLI
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Geoffrey Woglom
Amherst College
Professor of Economics (Emeritus)

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  - Jon Haveman, Executive Director, NEED
  - Geoffrey Woglom, Amherst College, Emeritus
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Outline

I. Debt Basics

1. *Definitions and Data.*
2. *Not all deficits are bad, but since 1982, deficits have not served economic purpose.*
3. *Debt Dynamics*
4. *Traditional View (1980) of the costs of the debt, based on rising interest rates*

II. Break!!

III. Three New Views on the Costs of Debt:

1. *Modern Monetary Theory: There are no costs.*
2. *Olivier Blanchard: Stable debt has little cost.*
3. *Furman and Summers: Given Blanchard, lets increase the debt now!*
4. *But there still are still big risks.*

IV. Your Questions (I hope)

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What Does the U.S. Gov't Budget Look Like?

Fiscal 2020 Budget Summary

Revenue	Billions		Outlays	Billions
Income Taxes	$1,609	Programmatic Outlays	Mandatory	$2,315
Payroll Taxes	$1,310		Discretionary	$3,850
Corporate Taxes	$212		Interest	$387
Other	$289			
Total	$3,420		Total	$6,552

Budget Deficit $3,132

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Source: Congressional Budget Office, *Monthly Budget Review*, Nov 2020

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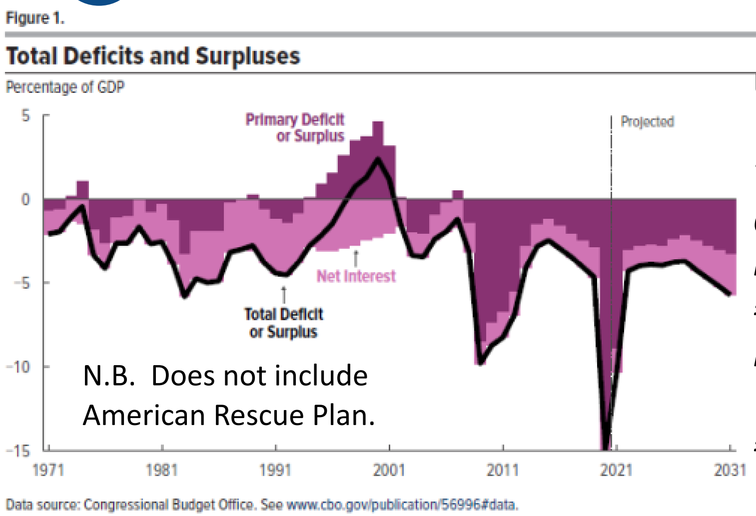
Past and Future of Deficits



N.B. Does not include American Rescue Plan.

Useful Deficit Decompositions:

Total Deficit= (Programmatic Outlays + Interest Expense)-Revenue
=(Programmatic Outlays – Revenue)+Interest Expense

*=**Primary Deficit** + **Net Interest***

Polls 1 &2

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Source: Congressional Budget Office, The Budget and Economic Outlook: 2020 to 2030, 9/20

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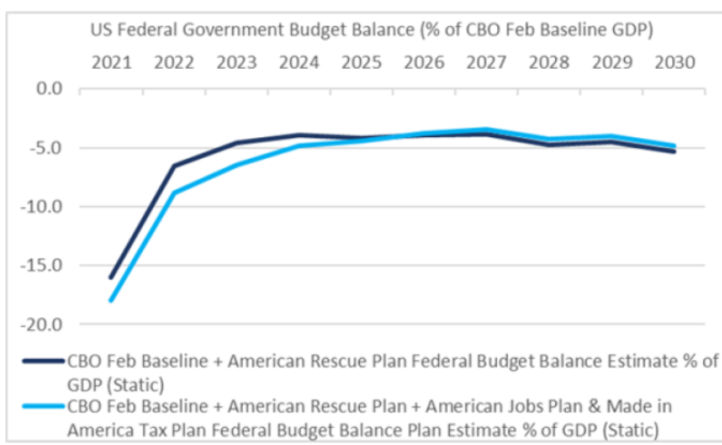
The Effect of the American Rescue Plan

Good News (?); 2021 deficit is still less than the 30% deficit in 1943



Sources: Congressional Budget Office, The Conference Board.

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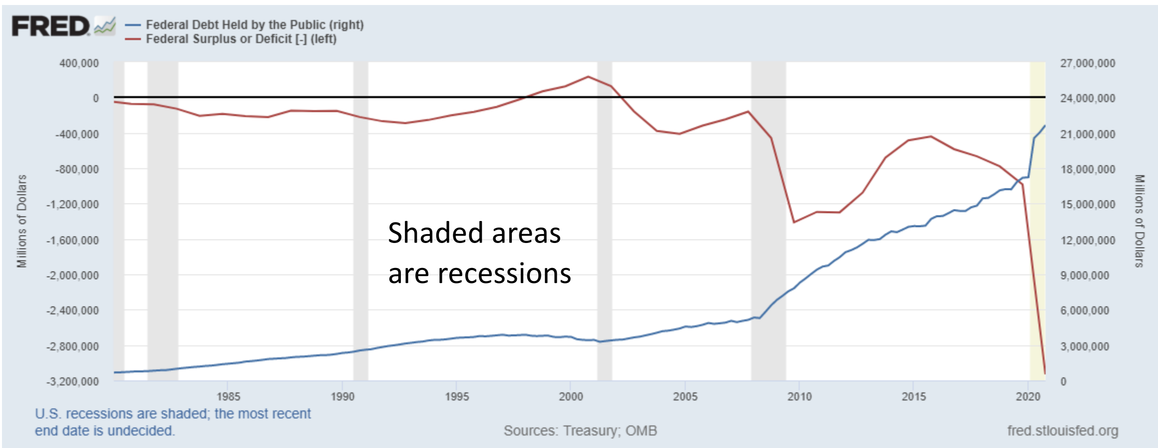
Debt vs. Deficit

The Sum of All Past Deficits Less Surpluses Equals the Debt



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Poll 3

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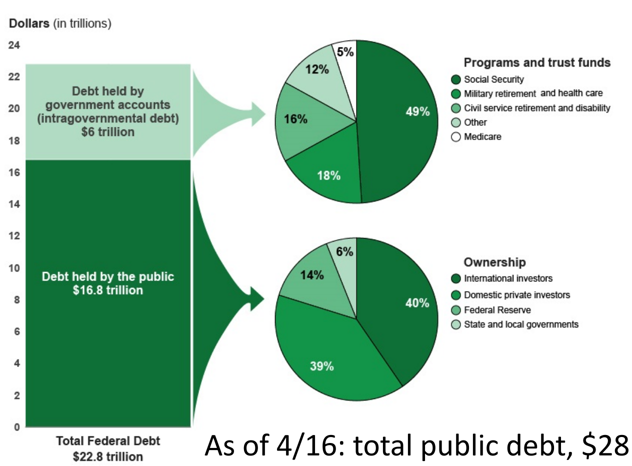
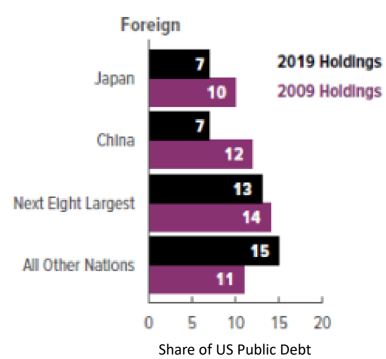
A Breakdown of the Total Federal Debt





As of 4/16: total public debt, $28.1 tr, held by the public, $22.0 tr.

As of Feb, Japan holds $1.26 tr
China Holds $1.10 tr:
https://ticdata.treasury.gov/

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https://www.cbo.gov/system/files/2020-03/56165-CBO-debt-primer.pdf

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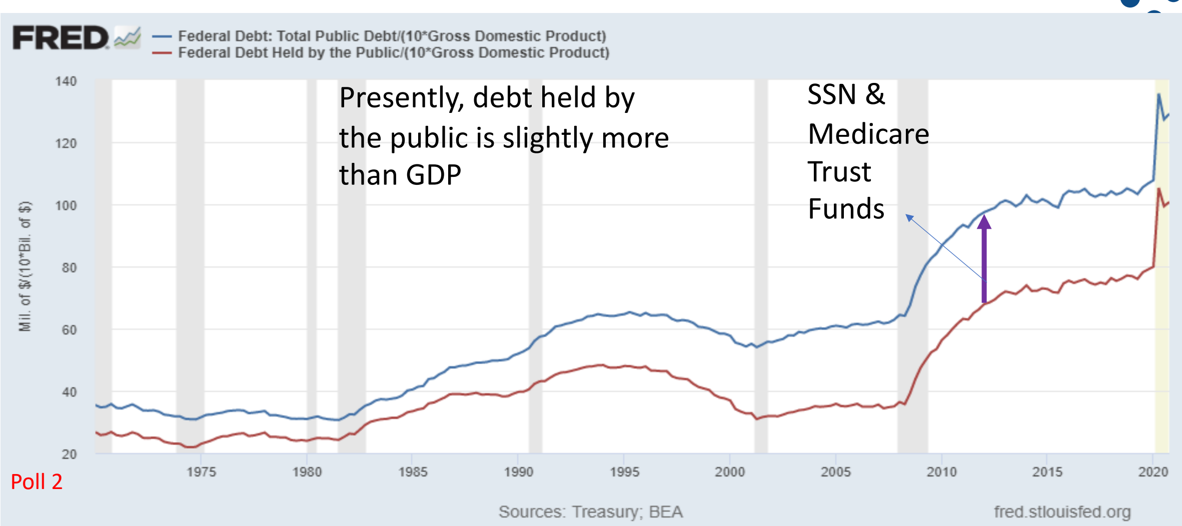
Not All Debt Is Created Equal

Intra-governmental debt is important bookkeeping.

- This debt **DOES NOT** require funding on credit markets

- **Debt held by the public**
  - This debt is funded by borrowing on credit markets and competes with private funding.
- **Most analyses focus on the publicly debt *relative* to GDP because:**
  - To the extent that debt and deficits have burdens these burdens depend on the size of the debt ***relative*** to the size of the economy.

Two Measures of the Debt



CBO: Budget Analysts in Chief

- **The Congressional Budget Office was founded in 1974 to provide Congress with information about the budgetary implications of legislation.**
- **Two kinds of Reports**
  - Cost Estimates – HR 6036 VA Family Leave Act of 2020
  - Projections of Debt and Deficits – The Budget and Economic Outlook: 2020 to 2030

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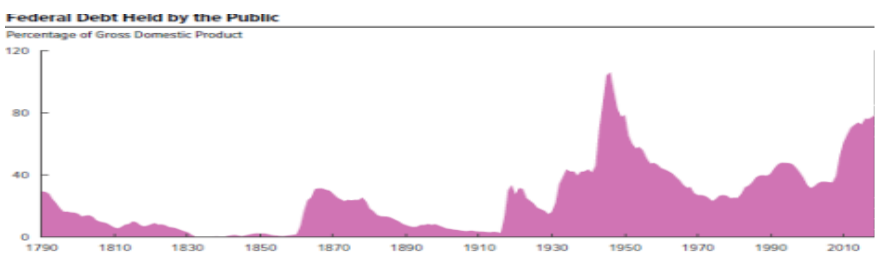
Key Points About the U.S. Relative Debt



1. **Relative debt peaked during WWII (106%) - followed by a steady decline until the 1980s.**
2. **Prior to 1983, relative debt rose purposefully (wars, recessions, public investment) and then fell.**

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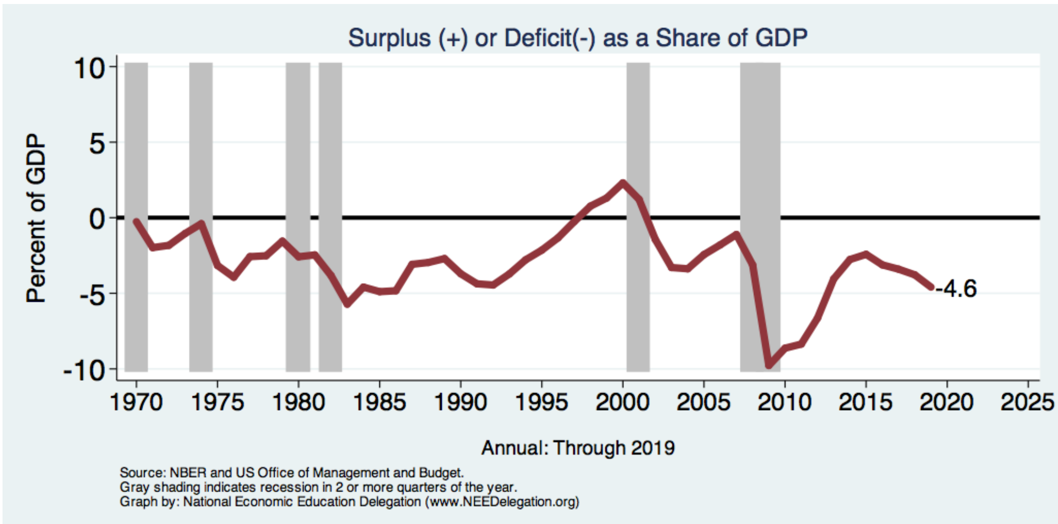
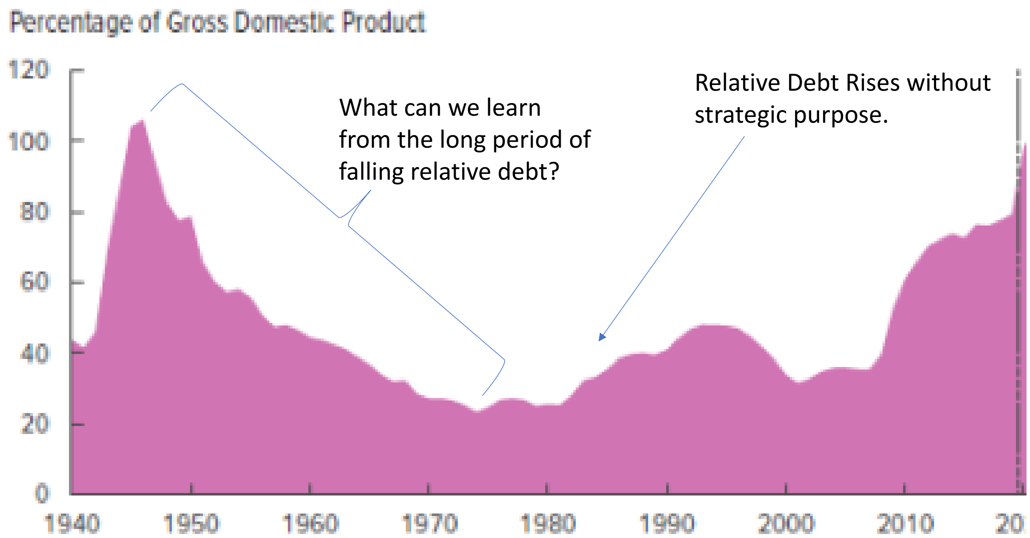
Purposeful Deficits #1: Recessions



Purposeful Deficits #2: Good Reasons to Borrow

1. **To Meet a Temporary need: e.g. WWII. Spread the costs over a number of years.**
2. **To Finance Profitable Investment Projects:**
   - In the late 1970s, improvements to water systems mandated by the Clean Water Act;
   - In the late 1990s and early 2000s, research and development for health-related programs; and
   - In the late 2000s and early 2010s, Obama stimulus fostered the development of infrastructure for transportation and boosted spending for education at all levels.
   - Biden’s American Jobs Plan?

Relative Debt since 1940 to 2020



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Source: CBO, 9/2020

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Debt Dynamics

- **Between 1946-1974, relative debt fell continuously in spite of deficits in 21 of the 29 years, with the debt increasing by 42%. How?**
- **1946-1974, deficits caused the debt to grow, but not as fast as GDP.**
- **While the debt grew by 42%, GDP (nominal) grew by 550%**

You don't need a surplus to reduce the *relative* debt

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More Generally:

1. **Relative Debt falls when the debt is growing more slowly than the economy (Growth in GDP).**
2. **Relative Debt rises when the debt grows faster than GDP.**
3. **Stabilizing the Relative Debt requires deficits that cause the debt to grow at the same rate as GDP**

Poll 4

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A little bit more on Debt Dynamics

- **How fast does the debt grow?**
  - Suppose that programmatic outlays were just equal to total revenue (i.e. the primary deficit is zero), then the deficit would be the interest expense, and the growth rate in the would be in the interest rate.
  - E.g, debt equals 200, interest rate equals 5% and the primary deficit is zero. The deficit is 10 (.05X200) and the debt grows by 10, which is 5% of 200.
  - If the primary deficit is greater than zero, then we know that the grow rate in the debt is greater than the interest rate.
  - If the primary deficit is less than zero (primary surplus) then the debt grows at a rate less than the rate of interest.

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Traditional Views of the Cost of the Debt

- **First a non-issue: The analogy between household and government debt is inaccurate.**
  - The government does not have to pay back the debt.
  - Retirees cash in maturing bonds which are financed with new bond issues sold to younger people.
  - Interest on the debt is essentially paid by the young to their parents
- **Economist View of the Debt circa 1980, very little cost because relative debt was falling and rising debt served a purpose. But that changed in 1983**

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Traditional View: Debt and Deficits Raise Interest Rates

1. **Investment Crowding Out: Higher interest rates lead to less investment and over time to a smaller capital stock and reduced future output.**
2. **Foreign Borrowing: Higher interest rates lead to foreign capital inflows or foreign borrowing. With foreign borrowing, some of our GDP is paid to foreigners as interest.**

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Traditional View: Debt and Deficits Raise Interest Rates (Cont.)

3. **Government Crowding Out: For any overall deficit, the higher the interest expense the less government spending or the higher taxes.**
   - The deficit was 2.8% of GDP in 1994 and 2014.
   - 1994: interest expense was 2.8% and PD =0;
   - 2014 interest expense was 1.3% and PD = 1.5% (lower interest rates).

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Don't Deficits Cause Inflation?

- **No, inflation is caused by excessive aggregate (total) demand.**
- ***Competent* central banks will offset too much aggregate demand by raising interest rates.**
- **But incompetent central banks may be tempted (or forced) to cause inflation to help the Treasury by generating inflation**
  - Hyperinflation, Weimar Germany; Zimbabwe in the 2000s.
  - Government may be tempted to "inflate away" high debt levels. Raise the rate of growth of the denominator with inflation

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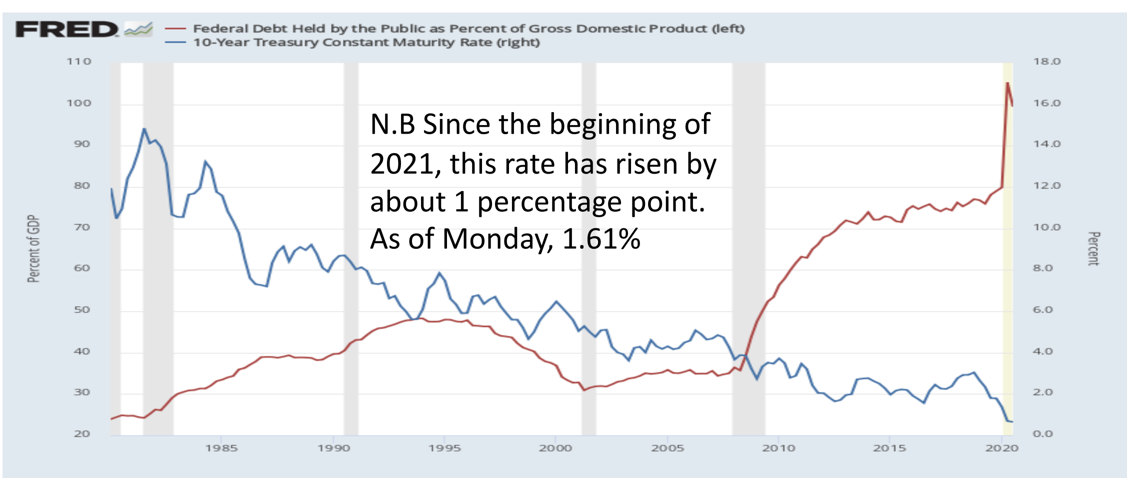
Summary Part I.

1) Debt is the accumulation of past deficits.
2) The costs of the debt are proportional to the size of the economy; i.e. to the relative debt.
3) The debt that matters is the publicly held debt, 40 percent of which is owned by foreigners.
4) Prior to 1980 relative debt fell except during wars and recessions.
5) The relative debt falls when the economy (GDP) grows faster than the debt.
6) Costs of the debt are primarily due to rising interest rates.

Questions?

The Dog that Didn't Bark; Rising Interest Rates?



Maybe Debt Isn't a Problem After All: MMT

- **Stephanie Kelton provided a prominent and recent exposition of Modern Monetary Theory in her June 6th *NYTimes* op-ed, "Learn to Love Trillion-Dollar Deficits."**
  - US Treasury borrows in dollars and therefore cannot default (as opposed to Greece).
  - Example: How did we "find the money" for the recent increase in the debt (about $4.2t)?
  - Answer: Fed increased its holding of Treasuries by $3.3 t, providing 79% of the financing.
  - More generally, she argues that we can always find the money to increase federal spending, or turn to the Fed.

Sources, Daily Treasury Statements and Federal Reserve Board

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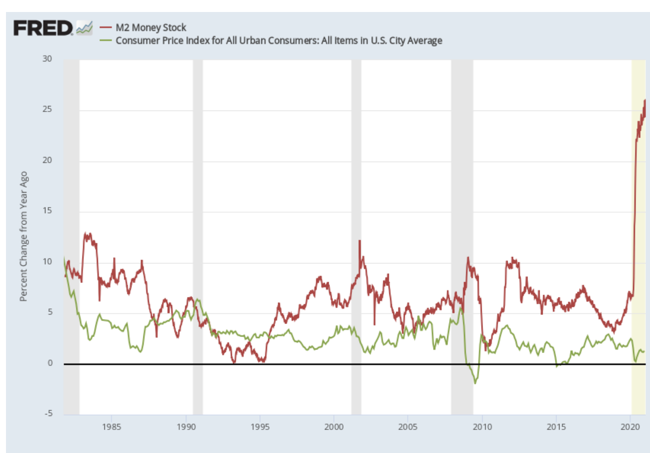
Isn't the Fed creating Money?

Yes, but there is no (at the moment) excess aggregate demand. And, more generally the link between money growth and inflation is pretty weak.



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MMT's Free Lunch

- The only limit on deficit spending is if it leads to too much spending thereby increases current inflation.
- Recognizing this fact, "…could free policymakers not only to act boldly amid crises but also to invest boldly in times of more stability."
- Too bad the second part isn't true

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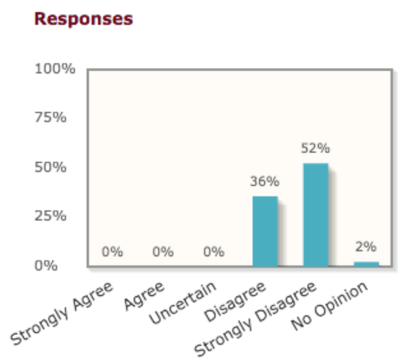
Don't Just Take My Word for It

Question A: Countries that borrow in their own currency should not worry about government deficits because they can always create money to finance their debt.

Poll 5



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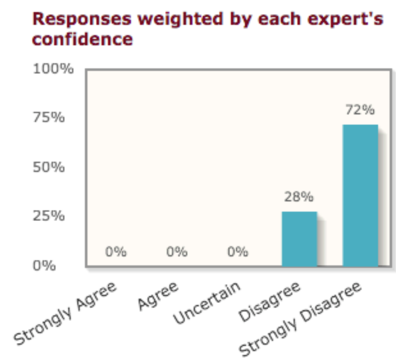
Source: IGM Economic Experts Panel
www.igmchicago.org/igm-economic-experts-panel



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Source: IGM Economic Experts Panel
www.igmchicago.org/igm-economic-experts-panel

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More on Consensus Criticism of MMT

- What happens when "not worrying about deficits" leads to excess aggregate demand and inflation.
- Dr. Kelton: At that point, Fed stops buying bonds leading to a rise in interest rates; if that is not sufficient the deficit should be reduced to cut aggregate demand.
- Economic point: The economy has a lot of momentum and stopping inflation takes time.
- Political economic point: Will there be the political will to raise interest rates and cut government spending and raise taxes in time?

A More Reasonable, But Still Optimistic View

Olivier Blanchard:

- Emeritus Professor MIT
- Chief Economist at the IMF, 2008-2015
- President of the American Economic Association, 2018

Olivier Blanchard's Presidential Address to the AEA 1/2019

"If the future is like the past [with low interest rates],…the issuance of debt without a later increase in taxes may well be feasible. Put bluntly, public debt may have no fiscal cost."

But,

"My purpose…is not to argue for more public debt, especially in the current political environment. It is to have a richer discussion of the costs of debt…than is currently the case."

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What the Traditional View Got Wrong

- **Stabilizing the Relative Debt, Debt/GDP, requires that the growth rate in debt equals the growth rate of GDP.**
- **The traditional view assumes that the interest rate on debt is greater than the growth rate of GDP**
  - So the primary deficit must be ***negative*** (primary surplus) to lower the growth rate of the debt

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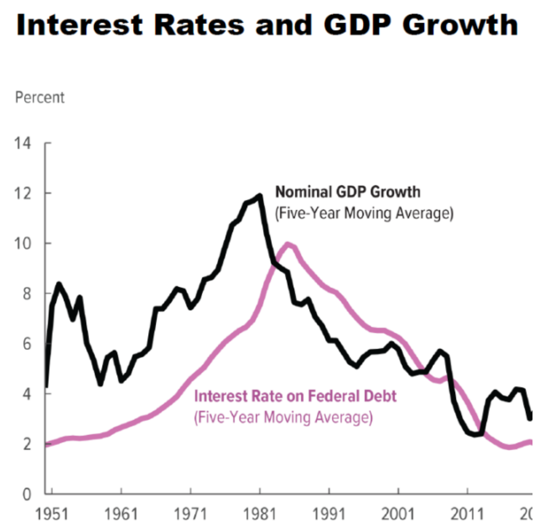
Blanchard's Evidence

An Overview of the 2021 Long-Term Budget Outlook

CBO, 4/19/2021



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An Almost Free Lunch

- **If the interest rate is *less* than the growth rate of GDP, then Debt to GDP can be stabilized with a (small) *deficit* in programmatic outlays relative to revenues.**
- **E.g., Suppose that the growth of GDP is 4% and the interest on the debt is 3%. If the primary deficit were zero, the relative debt would fall.**
- **Blanchard does believe that the relative debt must be stabilized**
  1. At some point deficits must be reduced.
  2. But it may not be crucial at what level the debt is stabilized.

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Taking It One Step Further: (St. Augustine)

Jason Furman and Larry Summers, 12/1 presentation to Brookings

- **Low Interest Rates are Here to Stay, but not clear why.**
  - private saving higher due to longer retirement periods, increased inequality, and rising uncertainty.
  - Bernanke's "Savings Glut" from China and Japan
- **Low Interest Rates Are a Problem:**
  - Fed fights recessions by lowering interest rates. This time by 2.25 pct. pts, vs. 6.3 pct. pts on average in the past recessions.
  - Low interest rates lead to financial instability in "search for yield."

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https://www.brookings.edu/wp-content/uploads/2020/11/furman-summers-fiscal-reconsideration-discussion-draft.pdf

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Furman & Summers Conclude

1. **Low Interest Rates Imply Public Investment may be quite profitable.**
2. **Expand Debt-Financed Public Investment *as long as* there are profitable investments and interest rates are at moderate levels (Good Reason to Borrow #2).**
3. **Kerfuffle over the American Rescue Plan**

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But why must the relative debt be stabilized

- For practical purposes, the US cannot default on its debt, but…
- International investors, however, can still lose if the exchange value of the dollar falls.
- Remember, foreign holdings of the public debt amount to 40 percent of the total

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Why do Foreigners Buy US Treasuries?

- Market for Treasuries is the deepest, (usually) the most liquid capital market in the world.
- US economy has a history of political and economic stability.
- The dollar is the largest international reserve currency.
  - Most international transactions are quoted in dollars, e.g., oil.
  - With some exceptions, foreigners borrow in dollars. E.g., Yankee bonds

What would happen if foreigners lost confidence in the stability of the dollar?

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CBO: Debt and Fiscal Crisis

The risk of [such] a fiscal crisis appears to be low in the short run despite the higher deficits and debt stemming from the pandemic…. Nonetheless, the much higher debt over time would raise the risk of a fiscal crisis in the years ahead.

CBO, *The 2020 Long-Term Budget Outlook*, 9/2020

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What would a Fiscal Crisis Look Like?

Foreigners lose confidence in the dollar and sell Treasuries in exchange for assets denominated in their own currency,

1. Sale of Treasuries raises interest rates, worsening or fiscal outlook.
2. Trading of Foreign for US assets lowers US exchange rate.
   a. Raising the price of imports thereby increasing inflation.
   b. Lowering the foreign currency returns on all US assets, exacerbating 1.

Could the Fed Bail us Out?

1. It could buy Treasuries and prevent the rise in interest rates.
2. Insufficient foreign assets to prevent the fall in the exchange rate,

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Bottom Line: We Need to Worry about the Debt

1. Interest rates may not stay this low forever.
2. A fiscal crisis should be avoided at all costs.
3. The good news is we may be able to stabilize the relative debt without a running a primary surplus.
4. Stabilizing the relative debt would substantially reduce the possibility of the crisis

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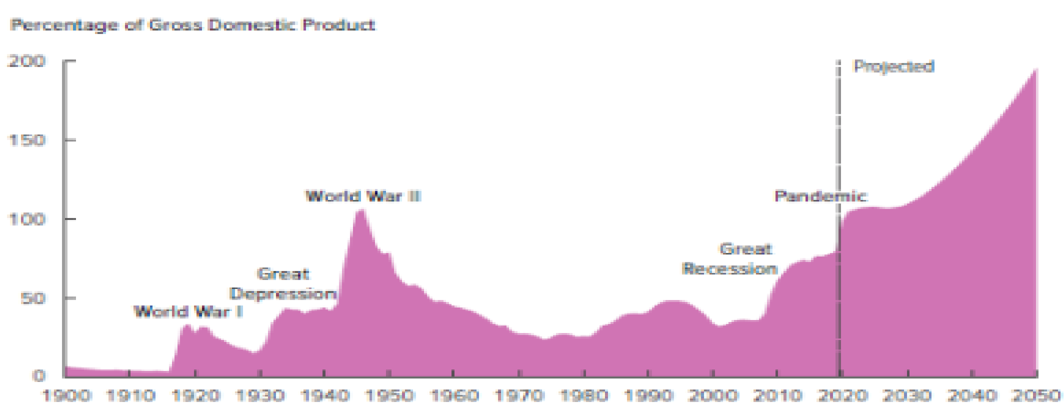
But is this Problem Impossible?



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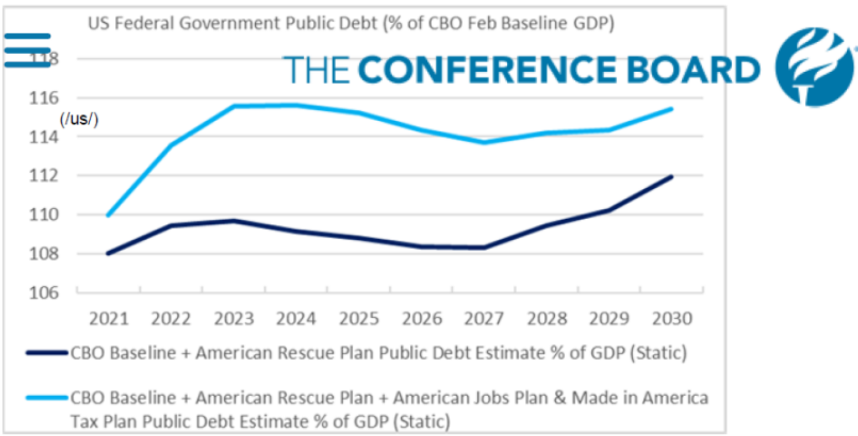
And it Gets Worse: Updated Projections



Sources: Congressional Budget Office, The Conference Board.

The Wisdom of Herb Stein, "If something can't go on forever, it will… stop

Great Herb, but how?

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CBO to the Rescue (*The 2020 Long-Term Budget Outlook, 9/2020*):

First a note on CBO projections:

- The "baseline projections" (such as on the previous slide) are based on the law as currently written; they are ***not*** forecasts of what will happen.
- E.g., when the social security trust fund is depleted in 2035 social security will continue to pay full benefits even though it will only collect about 75% in fica taxes.

But, CBO is allowed to project alternate scenarios

By 2025, deficit must go from projected 5% to about 3%

By 2030, deficit must go from 5.5% to about 2%

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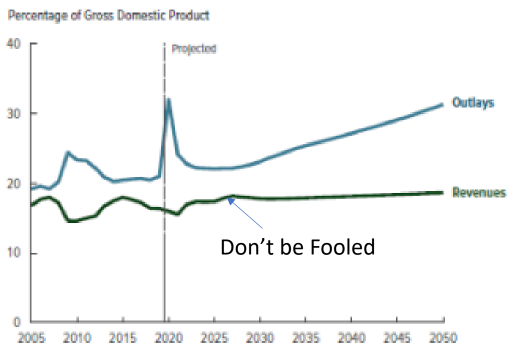
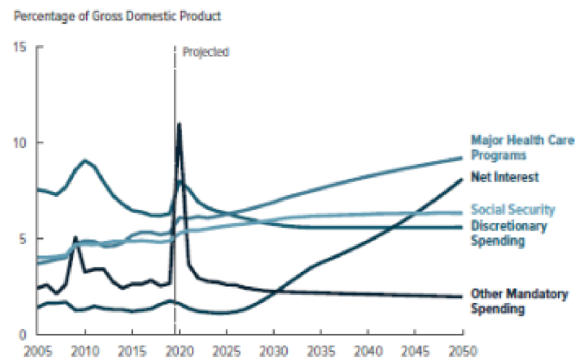
Bending the Curves!





We have some time, but it won't be easy.

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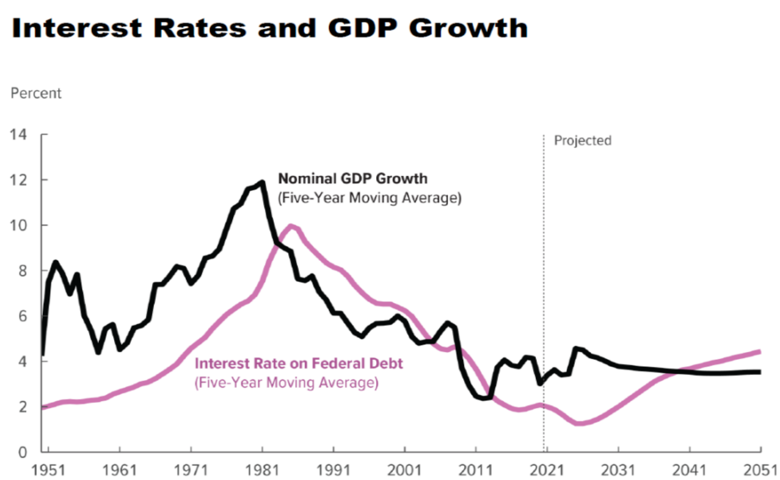
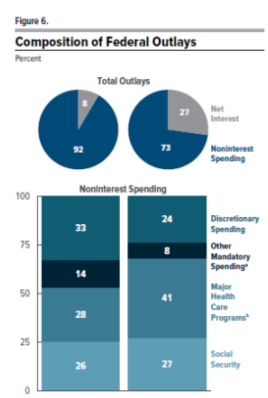
We Have Some Time CBO's Crystal Ball





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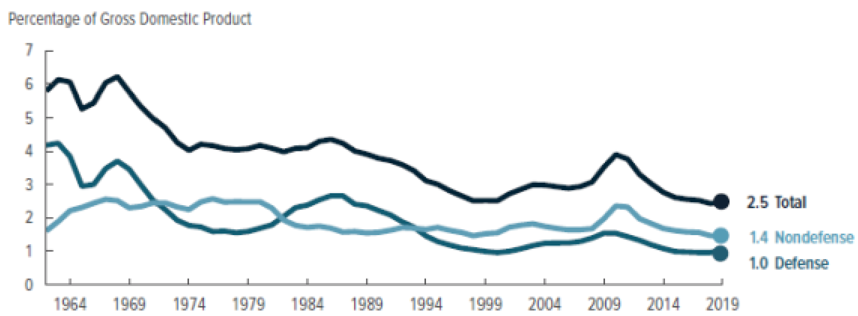
Do We Need More Public Investment?

Figure 2-1.

Federal Nondefense and Defense Investment Outlays, 1962 to 2019



Data sources: Office of Management and Budget; American Public Transportation Association; Bureau of Economic Analysis. See www.cbo.gov/publication/56900#data.

The figure reports budget outlays as the measure of investment spending.

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What Is Infrastructure?

American Jobs Plan & Made In America Tax Plan (Billions of US$)

Infrastructure Spending (Public)		**621**
	Highways, Roads, Bridges Repair	115
	Road Safety	20
	Modernize Transit Systems	85
	Amtrak Repair	80
	Electric Vehicle Charger **Grants**	174
	Revamp Airports	25
	Inland Waterways and Ports	17
	Transportation Infrastructure	45
	Infrastructure resilience	50
	Other	10
Infrastructure Spending 'At Home'		**650**
	Retrofit 2 million homes	213
	High speed Broadband	100
	Rehab Public Housing	40
	Clean Drinking Water	45
	Public School Building	100
	Grants	*50*
	Bonds	*50*
	Community College Infrastructure	12
	Upgrade child care Facilities	25
	VA Hospital Modernization	18
	Federal Buildings Revamp	10
	Conservation and Resilience Workers	10
	Clean Energy Accelerator	27
	Other	50

Care Economy	**Housing for the Aged and disabled persons**	**400**
R&D, Manufacturing & Training Spending		**580**
	R&D	180
	Strengthen Supply Chains	50
	Semiconductor Manufacturing	50
	Pandemic Preparedness	30
	Clean Manufacturing	46
	Regional Innovation Hubs	20
	NIST	14
	Domestic Manufacturing	52
	Small Business Aid	31
	Workforce Development	100
	Other	7
Revenue	**Total over 15 years**	**2000**
	Raise corporate tax rate from 21 to 28%	
	All Other	
	Raise global min tax rate from 13 to 21%	
	End federal tax breaks for fossil fuel companies	
	Loophole closure	
	Inversion elimination	
	Eliminate expense deductions for offshoring	
	Eliminate cred expenses for onshoring	
	Min Tax on /Large Corporations Book Income	
	Ramp up enforcement against corporations	

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Sources: The White House, The Conference Board.

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Thank you!

Any Questions?

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