The US Federal Debt

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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. What Must We Do when the Economy Has Recovered?

V. 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		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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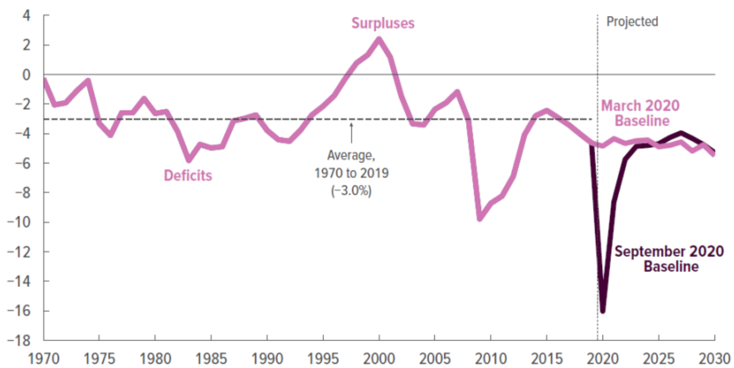
Past and Future of Deficits

Figure 1.

Deficits in CBO's September 2020 Baseline Versus Its March 2020 Baseline

Percentage of Gross Domestic Product



The deficit in 2020 will be the largest since 1945 as a percentage of GDP. Under current law, it is projected to shrink over the following few years, eventually returning to levels similar to those CBO projected before the coronavirus pandemic. Nevertheless, annual deficits would exceed their 50-year average throughout the 2021–2030 period.

Source: Congressional Budget Office.

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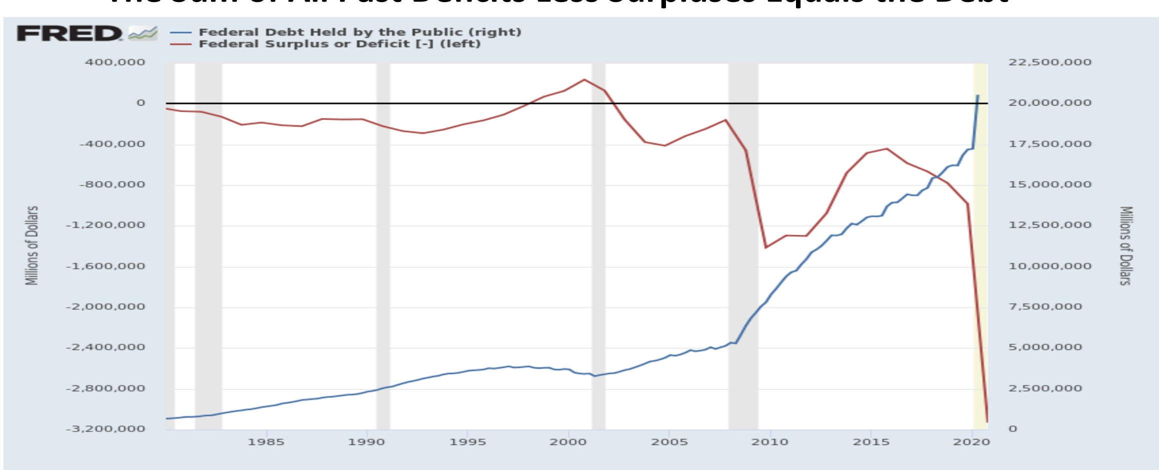
Source: Congressional Budget Office, The Budget and Economic Outlook: 2020 to 2030, 9/20

Debt vs. Deficit

The Sum of All Past Deficits Less Surpluses Equals the Debt



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What's Wrong with this Statement?

- "Once the debt is the same size as GDP all hope is lost; we will never be able to repay the debt."

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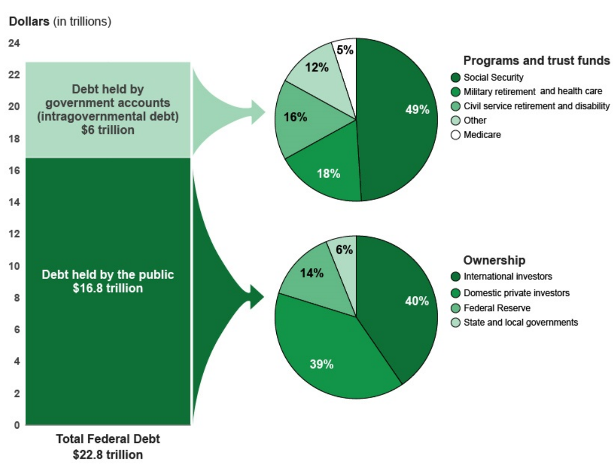
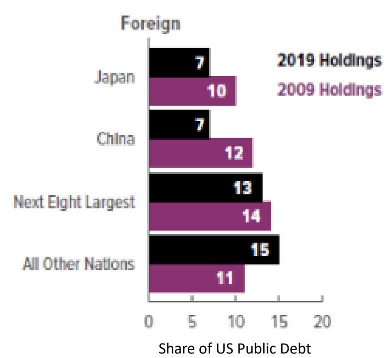
A Breakdown of the Total Federal Debt





As of 10/20, Japan holds $1.27 trillion
China Holds $1.05 trillion,
https://ticdata.treasury.gov/

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

Not All Debt Is Created Equal

- **Some debt can reduce the availability of investment funds to other borrowers.**
  - Often referred to as "crowding out" private investment
- **Intra-governmental debt is important bookkeeping.**
  - This debt **DOES NOT** crowd out private investment.
- **Debt held by the public**
  - This debt **MAY** crowd out private investment.
- **Most analyses of debt focus on the federal debt held by the public.**

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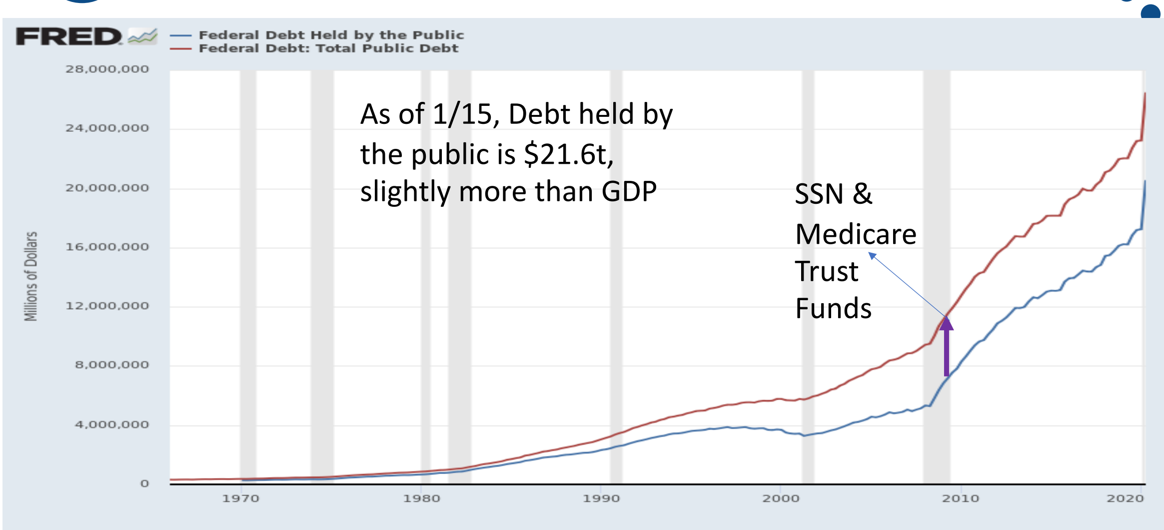
Two Measures of the Debt



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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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The All Important *Relative* Debt

- **CBO, analyzes the 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.

2018	Total Public Debt	Relative Debt Debt/GDP
United States	$17.0 Trillion	80%
Greece	$0.4 Trillion	176%

Third Quarter GDP = $21.2 t;
As noted earlier, public debt is $21.6t,
so relative debt is (21.6/21.2)X100= 102%

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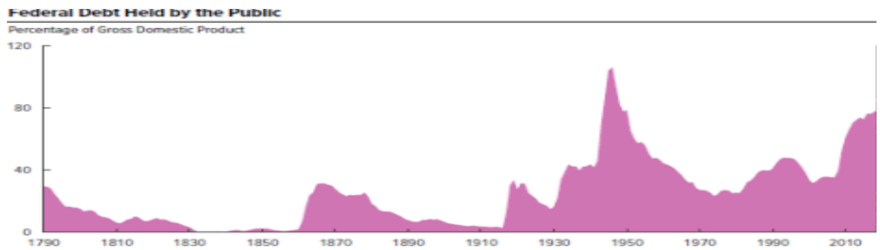
Key Points About the U.S. Relative Debt



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

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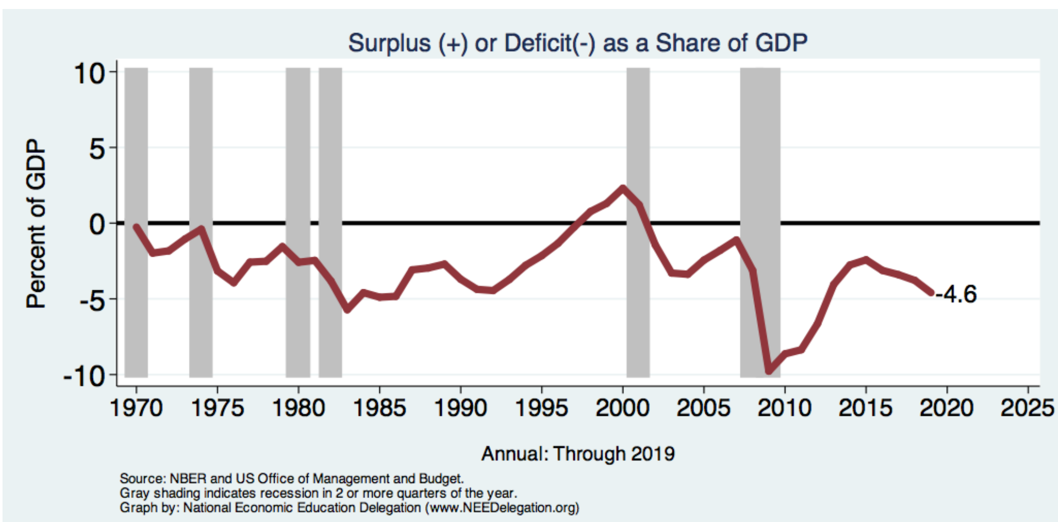
Purposeful Deficits #1: Recessions



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Purpose Deficits #2: Good Reasons to Borrow

- To Meet a Temporary need: e.g. WWII. Spread the costs over a number of years.
- To Finance Profitable Investment Projects: e.g., Interstate Highway System, $128.9b, or 2% of 1991 GDP; Higher incomes can be used to payoff the added debt

Recently, however, relative debt has been and is expected to continue to rise for the next 30 years w/o strategic purpose.

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What's Wrong(again)

- "Our relative debt is less than what it was at the end of WW2. It wasn't a problem then, so why be concerned now?"

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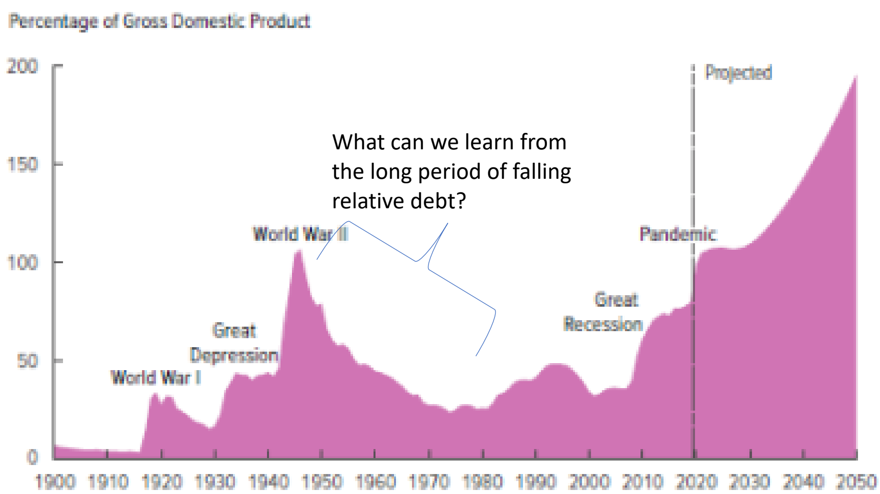
Relative Debt since 1940 and Projections



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Source: CBO, 9/2020

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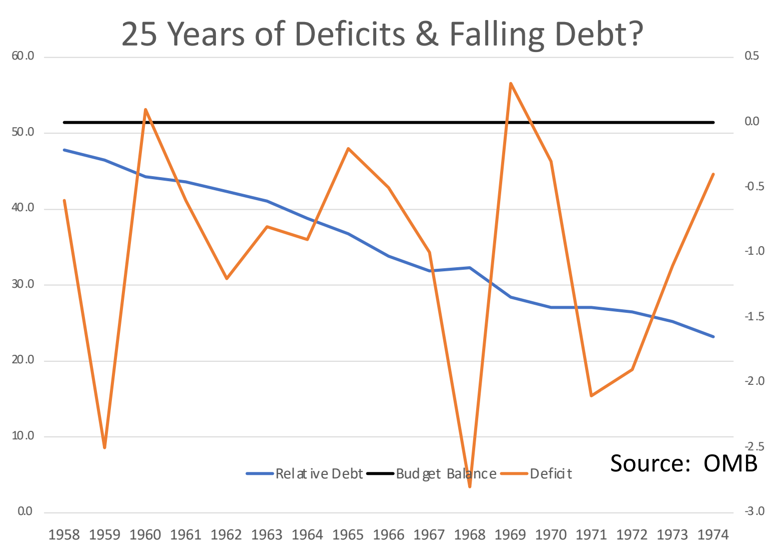
What Caused the Post WWII Rel. Debt to Fall?

Between 58 and 74, relative debt fell by more than 50%, 47.8% to 23.4%, in spite of only 2 years of tiny surpluses.



Source: OMB

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Debt Dynamics

- **The Relative Debt is a fraction – Debt/GDP; Fractions fall if**
  - The ***numerator*** falls (budget surplus: taxes exceed spending)
  - The ***denominator*** rises (nominal GDP growth)
  - The ***denominator*** *grows* faster then the ***numerator***
- **Stabilizing the relative debt requires the numerator and denominator to grow at the same rate: growth in debt equal to the growth in GDP.**
- **1958-1974, deficits caused the debt to grow, but not as fast as GDP.**

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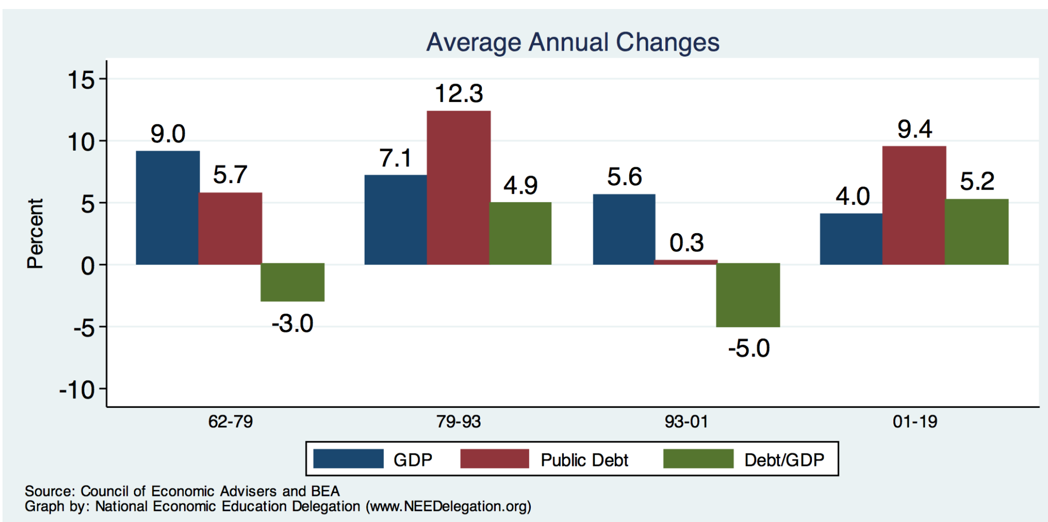
The Periods of Rising and Falling Rel Debt.



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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.)

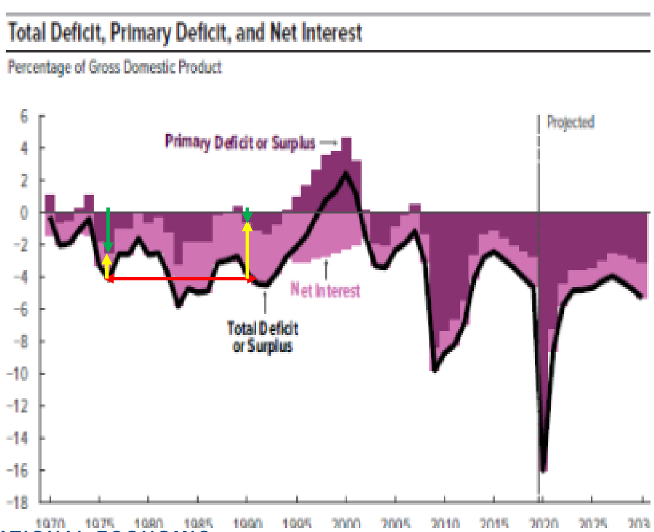
3. **Government Crowding Out: For any overall deficit, the higher the interest expense the smaller government spending or the higher taxes.**

Helpful Decomposition:

Primary Deficit is the difference between programmatic outlays and total revenue.

Total Deficit = Primary Deficit + Net Interest Expense

Example



1976: Deficit, -4.1%
1990: Deficit, -3.7%

1976: Interest, -1.5%
1990: Interest -3.1%

1976: Primary D, -2.7%
1990: Primary D, -0.6%

True or False:

- **The Primary Deficit is always less than the total deficit.**

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.**
- **One exception and one possible exception:**
  - 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

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 debt increased purposefully, not so now (except for the crisis).
5) The relative debt falls when the economy (GDP) grows faster than the debt.

Questions?

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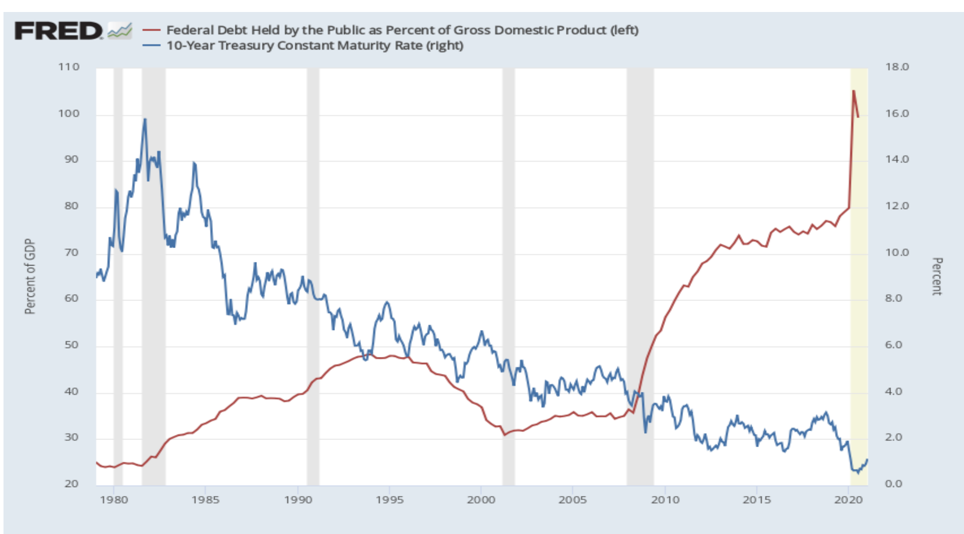
The Dog that Didn't Bark; Rising Interest Rates?



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Question

- **According to the Traditional Costs of the Debt, what should the preceding graph look like?**

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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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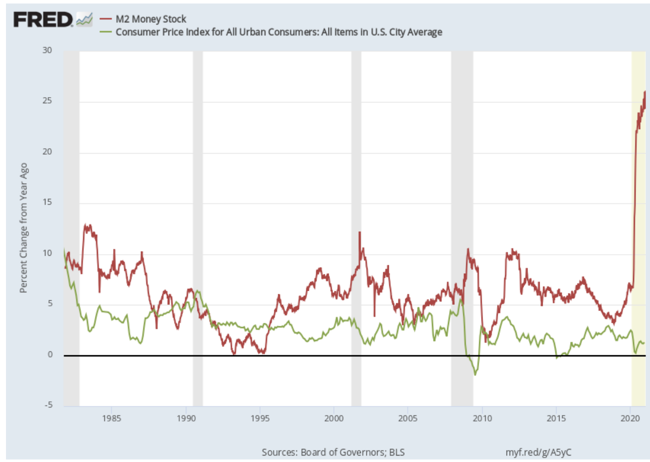
Isn't the Fed creating Money?

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 increasing 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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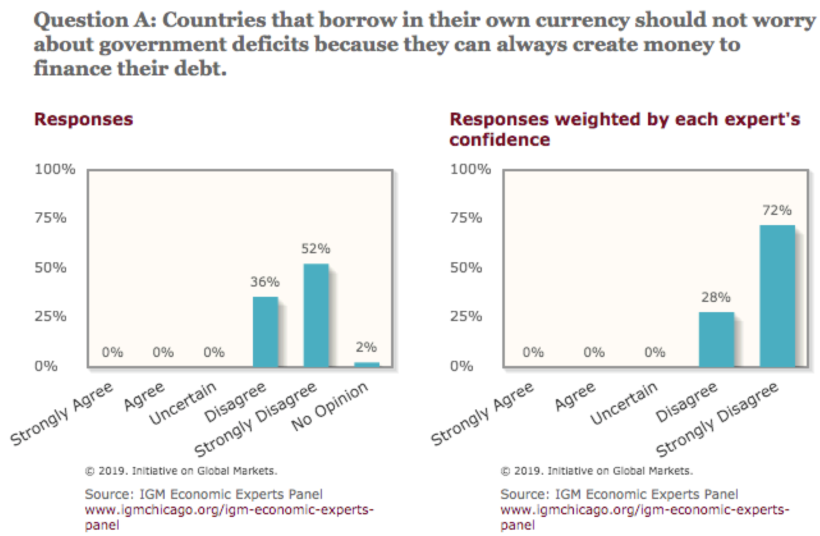
Don’t Just Take My Word for It



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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

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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 growth rate in debt has 2 parts:**
  1. The growth rate from interest on the debt which is just the interest rate.
  2. A contribution due to the difference between programmatic outlays less revenues, the primary deficit or surplus
- **The traditional view assumes that the interest rate on debt is greater than the growth rate of GDP**
  - So, 2. must be negative to offset excess of 1.
  - i.e., debt stabilization requires a ***primary surplus***

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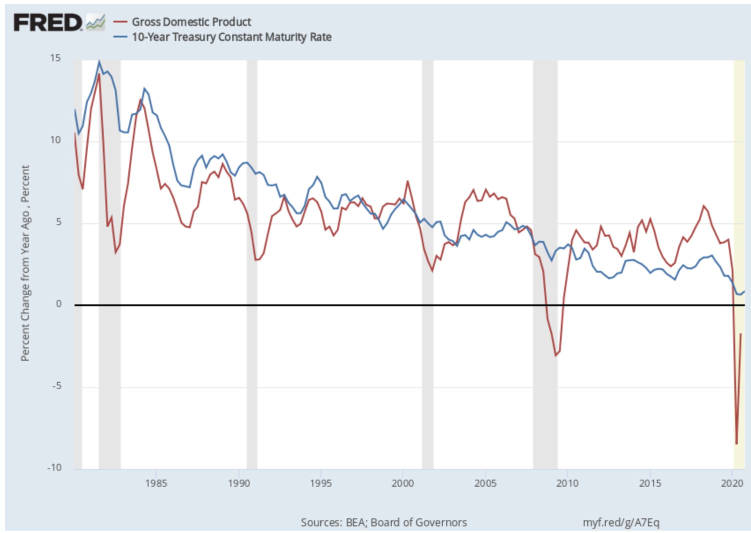
Blanchard's Evidence

Since 2000 (except for recessions), which is bigger?



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Numerical Example: Stabilizing the Debt

With some tedious algebra you can write the debt stabilizing condition where growth in debt equals growth in the economy as:

Primary Deficit(PD) = (growth in GDP-interest rate)Relative Debt (as a decimal)

Traditional View (interest rate=5%; GDP growth =4%):

Relative Debt = 100%, or 1: required PD = (4-5)=-1, Primary surplus of 1% of GDP

Relative debt =200%, or 3: required PD = (4-5)X2=-2. Primary Surplus of 2%

How does this illustrate Government Crowding Out?

Does this example understate required primary surplus of 200% debt?

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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.**

New View (interest rate=3%; GDP growth =4%):

Relative Debt = 100%, or 1: required PD = (4-3)=+1,

Relative debt =200%, or 3: required PD = (4-3)X2=+2.

- **The Bigger the Relative Debt the larger the PD is that is consistent with stabilizing the debt!**
- **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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Conclusion:

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.

In fairness to Dr Kelton, pretty close to MMT, but there is a difference. What is it?

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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) themost 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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Fiscal Crisis, or a Run on the Dollar

Concerns about the government's fiscal position could lead to a sudden and potentially spiraling increase in people's expectations of inflation, a large drop in the value of the dollar, or a loss of confidence in the government's ability or commitment to repay its debt in full….

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 loose 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 surplus.**
4. **Stabilizing the relative debt would substantially reduce the possibility of the crisis**

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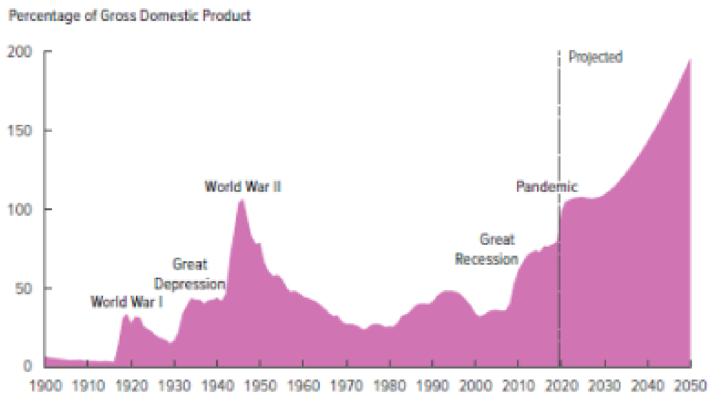
But is this Problem Impossible?



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.
- E.g., when the social security trust fund is depleted in 2035 social security will only payout in benefits what is collects in FICA taxes (about 75%).

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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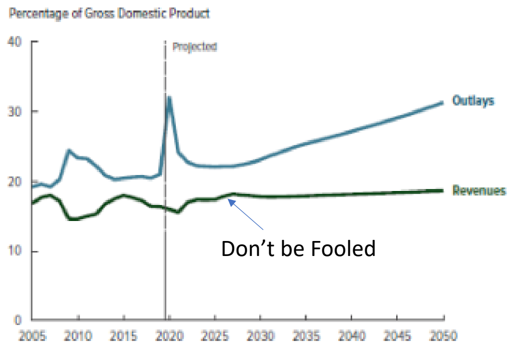
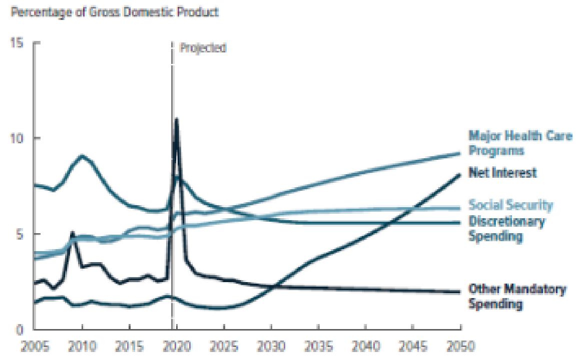
Bending the Curves!





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You've Convinced Me: Let's Act Now!

Cutting Off Your Nose to Spite Your Face?

- "I'm a fiscal hawk from way back, and all of my heebie-jeebies are going off when I see these numbers," said **Douglas Holtz-Eakin**. "But then I look at the scale of the problem, and I think, yeah, that's that. Gotta do it." *Politico,* 4/29
- **Janet Yellen** as reported in *Bloomberg,1/19/21:* "Right now, short term, I feel that we can afford what it takes to get the economy back on its feet, to get us through the pandemic," Yellen told the Senate Finance Committee, highlighting that interest rates are historically low…

  Yellen said that "it's essential we put the federal budget on a path that's sustainable" over time, but that the situation will be worse if investments aren't made now to support economic growth.

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Thank you!

Any Questions?

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