The US Federal Debt

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National Economic Education Delegation

- **Vision**
  - One day, the public discussion of policy issues will be grounded in an accurate perception of the underlying economic principles and data.
- **Mission**
  - NEED unites the skills and knowledge of a vast network of professional economists to promote understanding of the economics of policy issues in the United States.
- **NEED Presentations**
  - Are **nonpartisan** and intended to reflect the consensus of the economics profession.

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Who Are We?

- **Honorary Board: 54 members**
  - 2 Fed Chairs: Janet Yellen, Ben Bernanke
  - 6 Chairs Council of Economic Advisers
    - Furman (D), Rosen (R), Bernanke (R), Yellen (D), Tyson (D), Goolsbee (D)
  - 3 Nobel Prize Winners
    - Akerlof, Smith, Maskin
- **Delegates: 651+ members**
  - At all levels of academia and some in government service
  - All have a Ph.D. in economics
  - Crowdsource slide decks
  - Give presentations
- **Global Partners: 49 Ph.D. Economists**
  - Aid in slide deck development

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Course Outline

- **Contemporary Economic Policy**
  - ~~**Week 1 (5/17): US Economic Update (Jon Haveman, NEED)**~~
  - Week 1 (5/24): US Economic Update (Geoffrey Woglom, Amherst College)
  - **Week 2 (5/31): Federal Debt (Brian Peterson, Lagrange College)**
  - Week 3 (6/7): Economics of Immigration (Jon Haveman)
  - Week 4 (6/14): Economic Mobility (Jon Haveman)
  - Week 5 (6/21): The Gender Wage Gap (Jon Haveman, NEED)

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Credits and Disclaimer

- **This slide deck was created by:**
  - Jon Haveman, Executive Director, NEED
  - Geoffrey Woglom, Amherst College, Emeritus
- **Disclaimer**
  - NEED presentations are designed to be nonpartisan.
  - It is, however, inevitable that presenters will be asked for and offer their own views.
  - Such views are those of the presenters and not necessarily those of the National Economic Education Delegation (NEED).

Submitting Questions

- **Please submit questions of clarification in the chat.**
  - I will try to handle them as they come up.
- **We can have a verbal Q&A once the material has been presented.**
- **Slides will be available from the NEED website tomorrow (https://needelegation.org/delivered_presentations.php)**

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What Does the US Govt. Budget Look Like?

2021 Budget Summary (in billions)

Revenue			Outlays	
Income Taxes	$2,005		Mandatory	$3,735
Payroll Taxes	$1,416		Discretionary	$1,667
Corporate Taxes	$266		Interest	$305
Other	$301			
Total	$3,988		Total	$5,707

Budget Deficit: $1,719 Billion

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https://www.whitehouse.gov/wp-content/uploads/2021/05/budget_fy22.pdf

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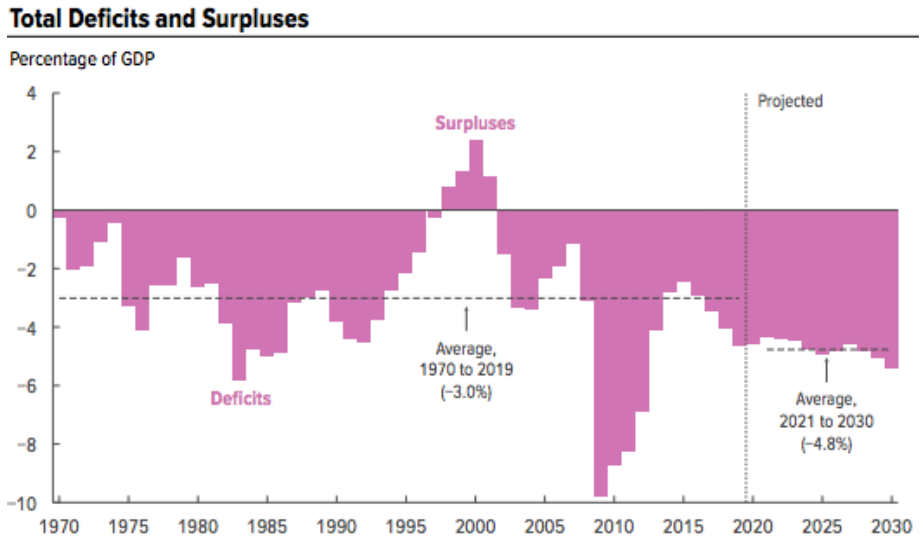
A Future of Deficits



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

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Of Debt, Deficits, and Surpluses

- **FLOW**
  - ***Deficit***: The excess of outlays over revenues in a year.
  - ***Surplus***: The excess of revenues over outlays in a year.

- **STOCK**
  - ***Debt***: The accumulation of all past deficits and surpluses over time.

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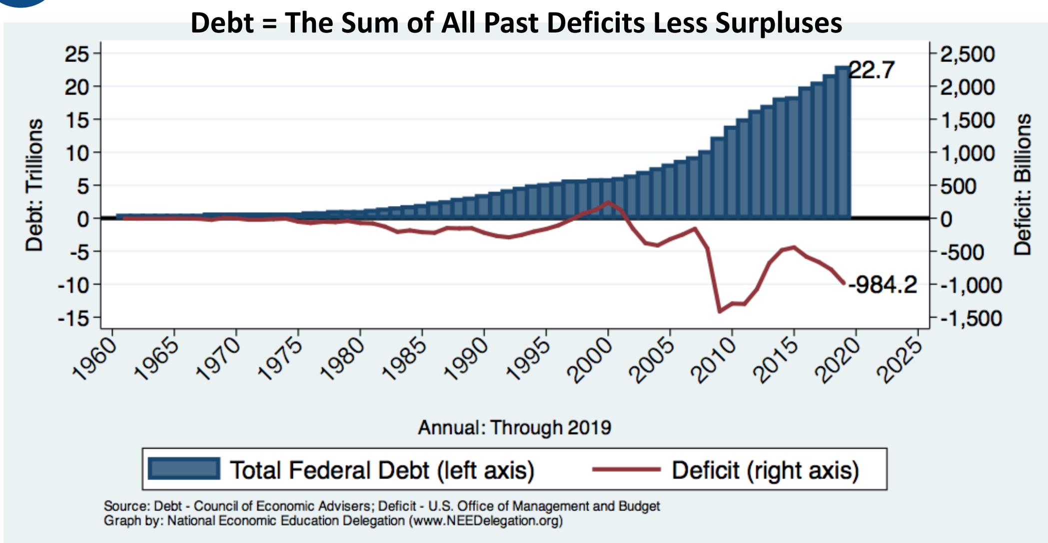
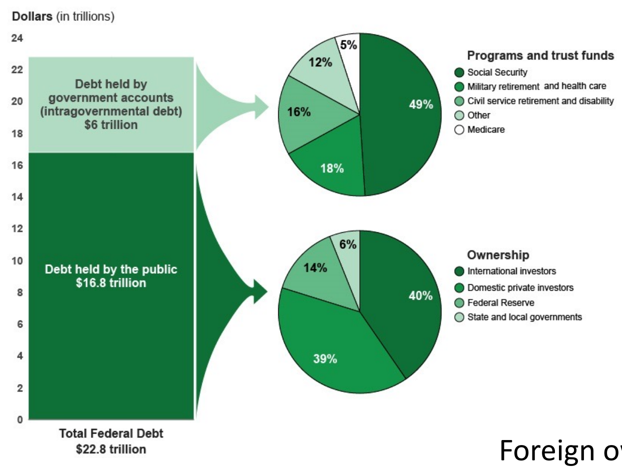
Debt vs. Deficit

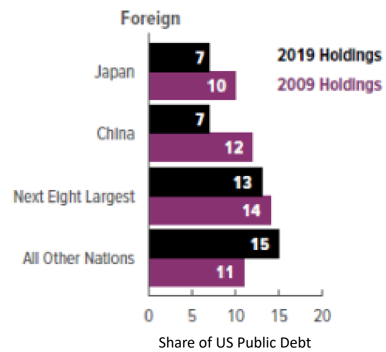


How Does the US Government Borrow?

- **It issues debt.**
  - Treasury marketable securities:
    - Treasury bills, notes, and bonds
    - TIPS: Treasury inflation-protected securities
    - Savings bonds
- **Who buys the debt?**
  - Other federal agencies
  - Individuals and businesses
  - State and local governments
  - Foreign government and individuals
  - Federal Reserve

A Breakdown of Total Federal Debt





Foreign ownership is relatively recent – in 1990 foreign ownership was less than 20%

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https://www.gao.gov/americas_fiscal_future?t=federal_debt

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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
- **Intragovernmental debt is (important) bookkeeping.**
  - This debt **DOES NOT** crowd out private investment.
- **Debt held by the public**
  - This debt **MIGHT** crowd out private investment.
- **Most analyses of debt focus on federal debt held by the public.**

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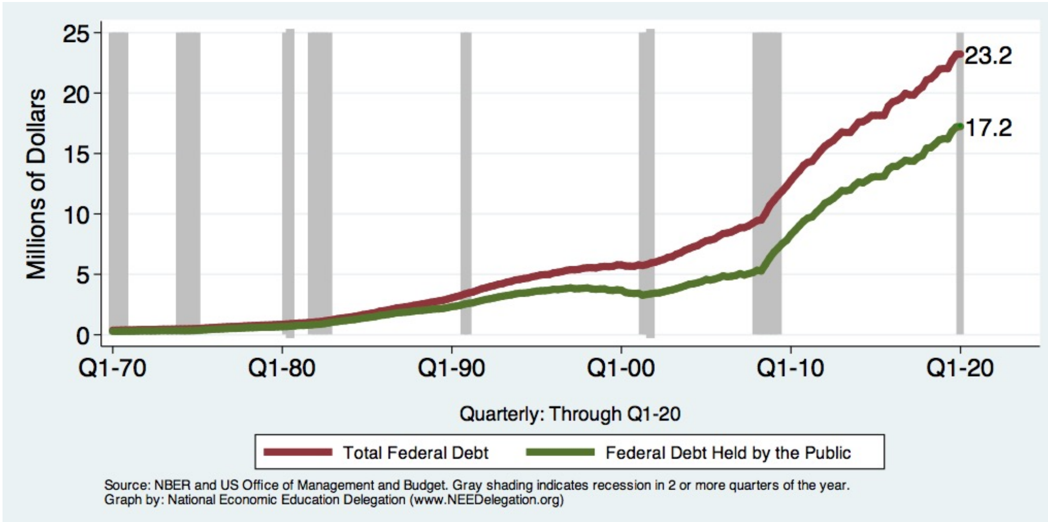
Two Measures of the Debt



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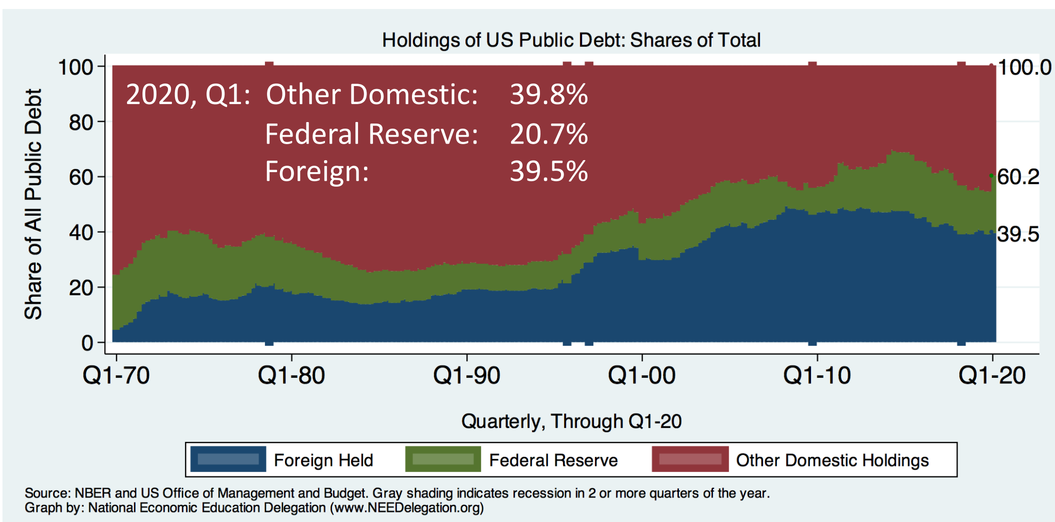
Trends in US Debt Over Time



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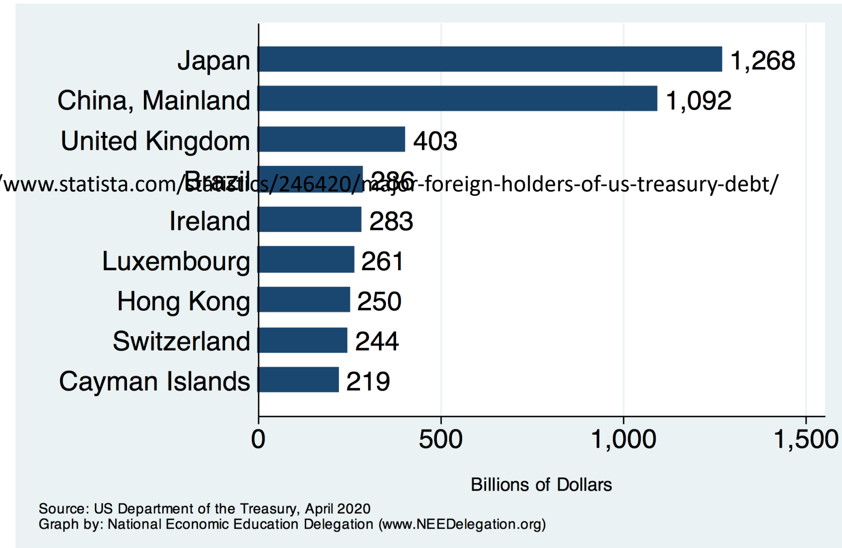
Who Holds US Debt?



https://www.statista.com/statistics/246420/major-foreign-holders-of-us-treasury-debt/

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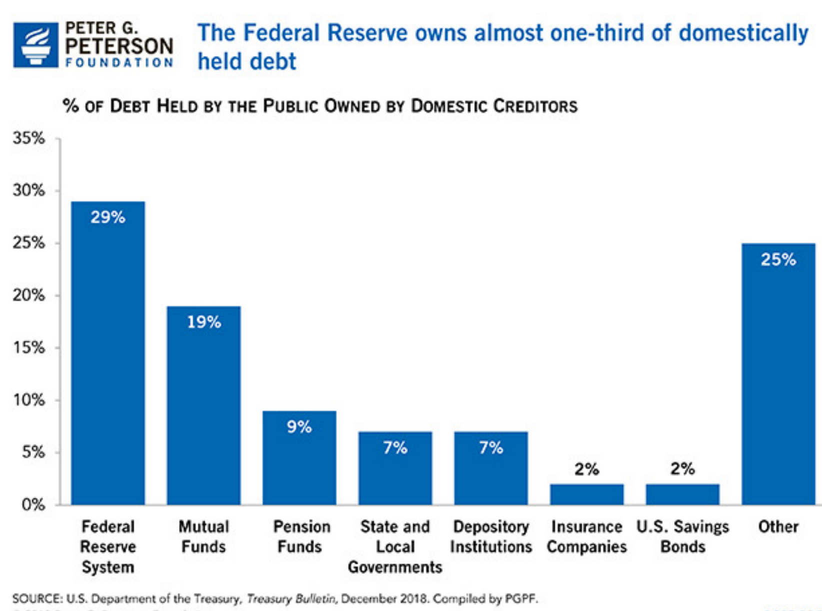

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The All-Important *Relative* Debt

- **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.

	Total Public Debt	Relative Debt Debt/GDP
United States	$23.4 Trillion	112%
Greece	$0.215 Trillion	170%

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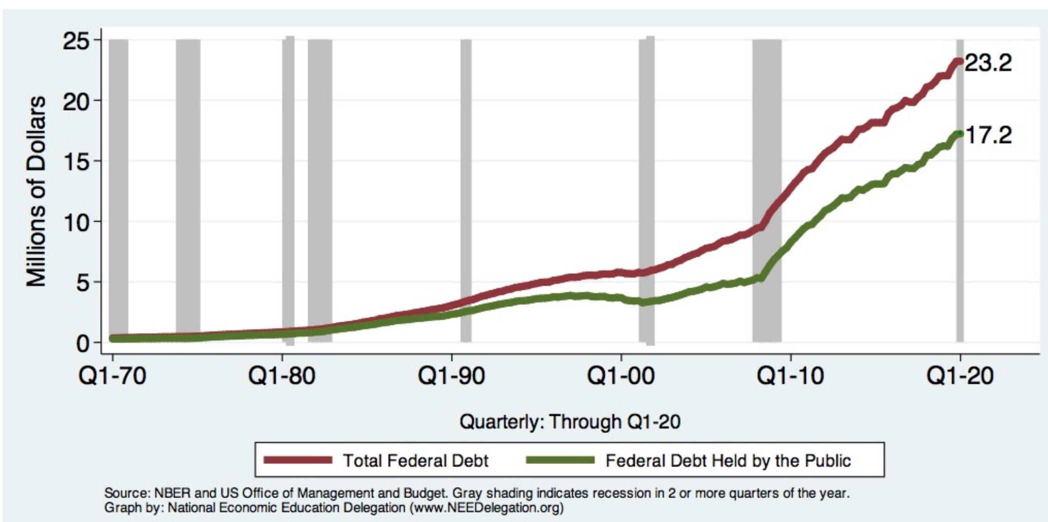
Two Measures of the Debt



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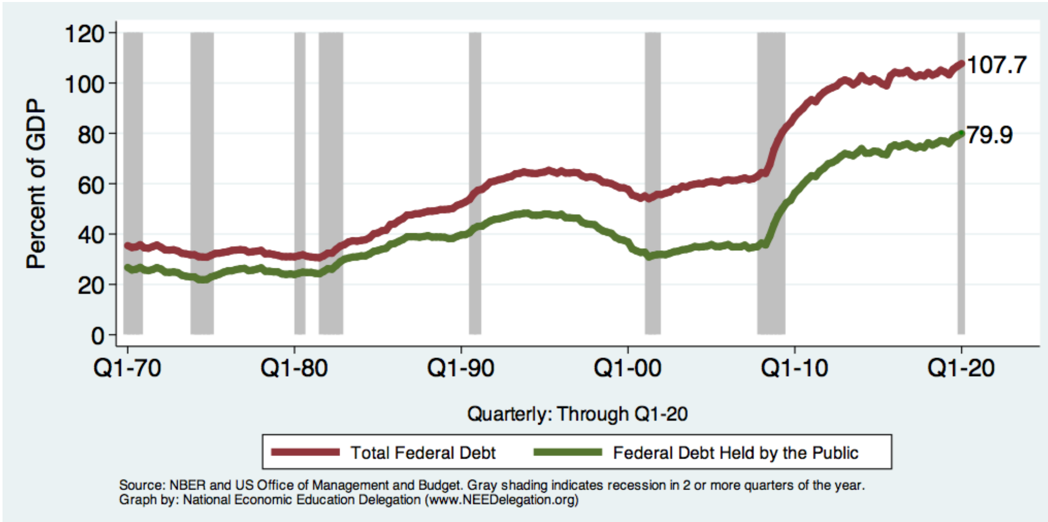
Two Measures of RELATIVE Debt



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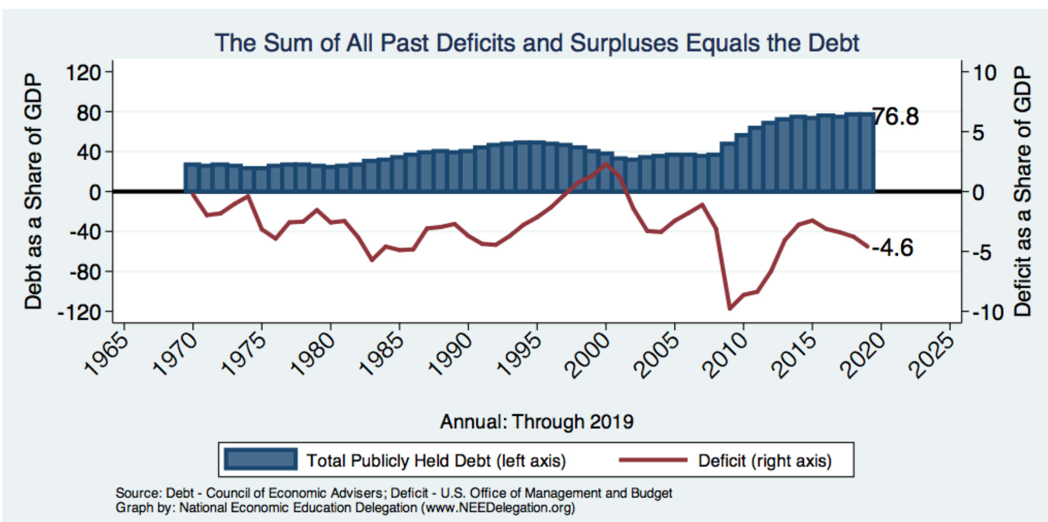
Relative Debt and Deficit



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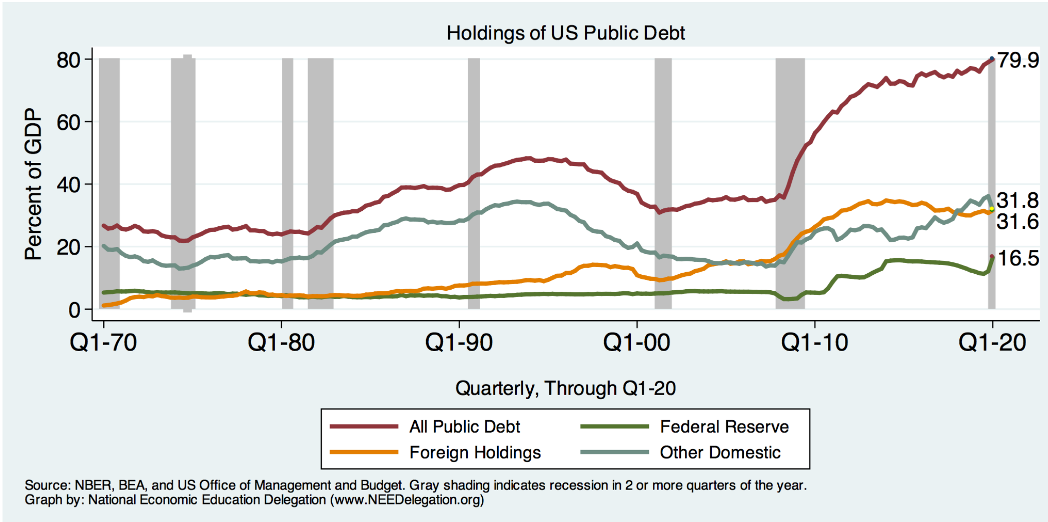
Summary: Who Holds US Public Debt?



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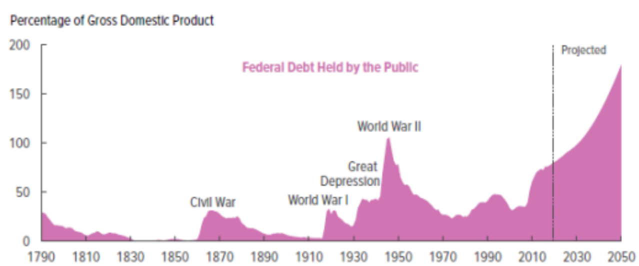
Key Points About US Relative Debt



1. **Prior to 1983, relative debt rose purposefully (wars and recessions) and then fell.**
2. **Relative debt peaked during World War II, followed by a long decline.**
3. **Relative debt has been and is expected to rise for the next 30 years w/o a strategic purpose.**

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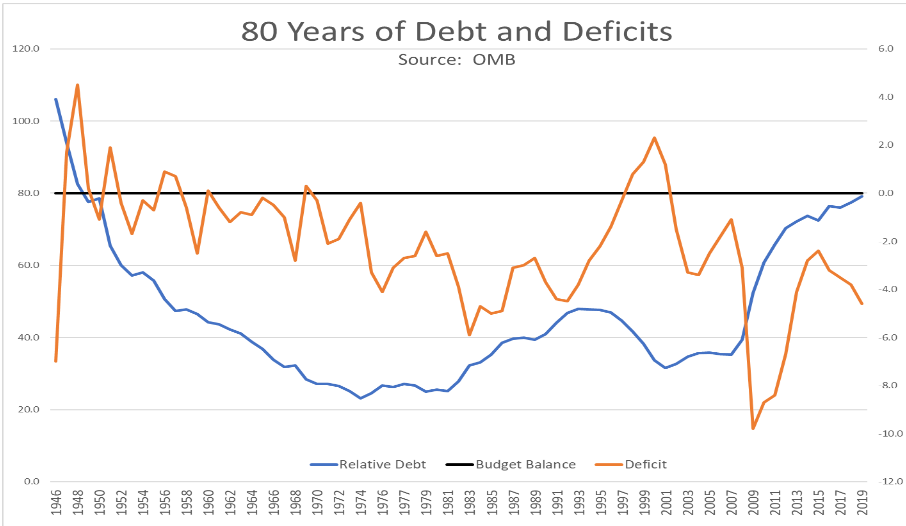
The Post-WWII Fall in Relative Debt



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Debt Dynamics

- **Surprising (?) Facts**
  - From 1945 to 1979, relative debt fell from 100% of GDP to 25% of GDP.
  - During this period, the federal budget was in surplus only once, in 1969.
- **Relative debt is a fraction: Debt/GDP; fractions fall if:**
  - The ***numerator*** falls (budget surplus)
  - The ***denominator*** rises (nominal GDP growth)
  - The ***denominator*** grows faster than the ***numerator***

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Two Measures of the Deficit

- (1) Primary deficit = current programmatic outlays – revenues
- (2) Total deficit = primary deficit + interest
- Interest on the debt is
  - The part of the total deficit that is due to past deficits.
- This distinction becomes important for understanding:
  - The future course of relative debt.
  - The costs borne by future generations because of the debt.

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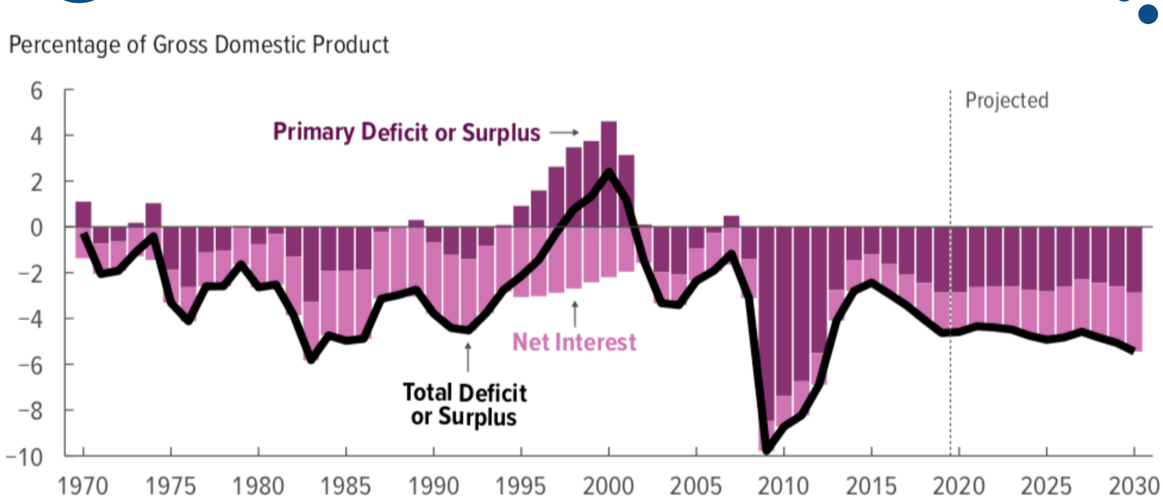
Rising Debt Levels Due to a Future of Deficits



This graph was done before Covid-19

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

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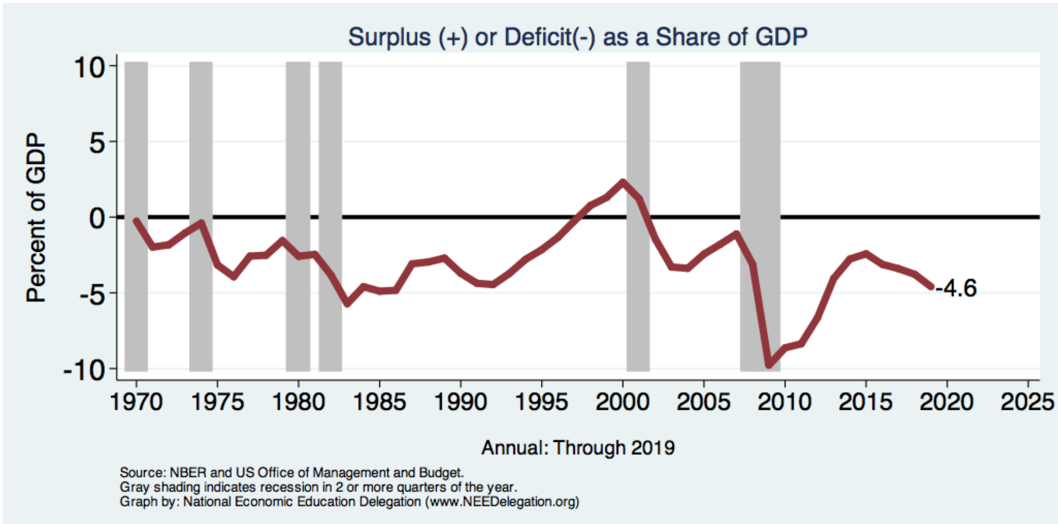
Deficits and Recessions



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How to Think About the Debt

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Perspectives on Increased Debt

- **Government borrowing crowds out private capital and investments.**
  - Weakened by the ability to borrow from other countries.
- **Does debt impose a burden on future generations?**
  - Does it inevitably have to be paid off?
- **In time, debt service might crowd out other government spending.**
  - Diminishing policy priorities in the budget.
- **Is it reasonable to borrow at low interest rates for investment?**
  - For example, for infrastructure.

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Not All Borrowing Is Bad!

- **Two good reasons to borrow:**
  1. During a temporary crisis
     1. Recession
     2. War
     3. Pandemic
  2. Productive public investment
     1. Infrastructure
     2. Education

- **These deficits did not and do not permanently increase relative debt.**
  - Great Depression, WWII
  - Public investment expands GDP and tax revenue

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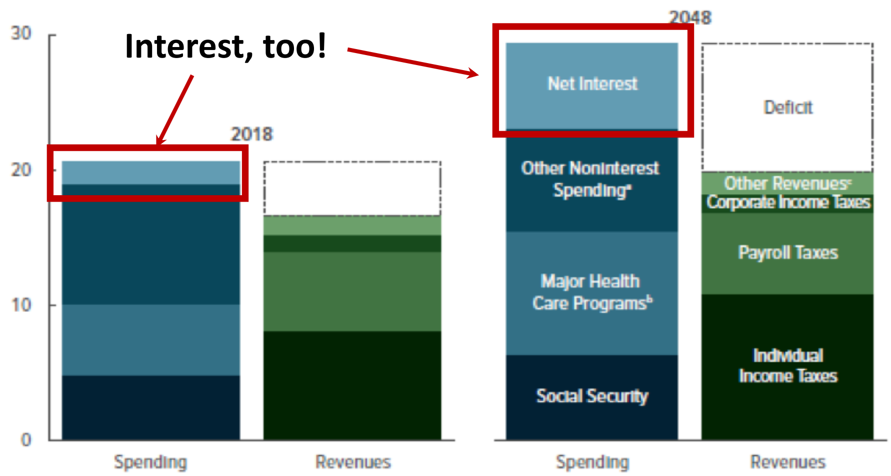
Spending to Grow Much Faster Than Revenue



Source: Congressional Budget Office.

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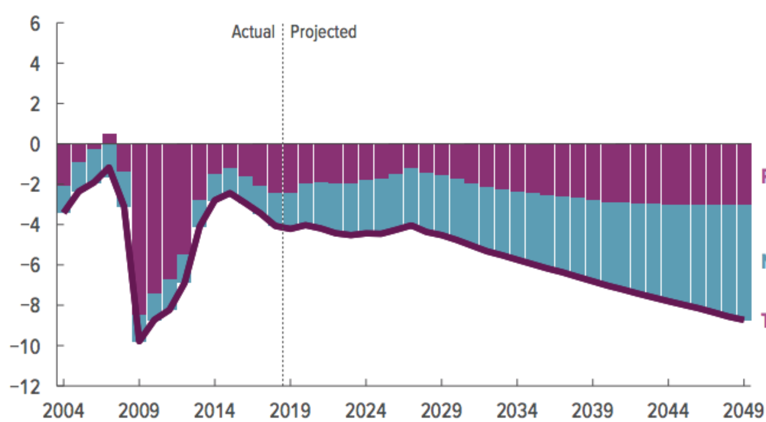
Interest Will Grow as a Share of the Deficit



Deficits grow from 4.2 percent of GDP in 2019 to 8.7 percent in 2049, driving up debt. Net spending for interest on debt accounts for most of the growth in total deficits.

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Is The Debt a Problem Today? (Pre-COVID 19)

- **Currently borrow about $100 billion each month with little difficulty.**
- **Very little evidence of "crowding out."**
- **Interest rates are very low, less than 1% on 10-year notes.**

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So, Why Worry About it?

- **If debt become too high:**
  - Investors might start questioning the creditworthiness of the US government.
    - Problem: Nobody knows how high is too high.
  - It becomes more difficult to borrow in times of crisis.
    - War, severe recession
    - "Fiscal space"
      - Impossible to measure how much we have.
      - Clearly, we have less now than in 2007.
  - Could start to crowd out investment by consumers and businesses.
    - Not currently a problem. No idea if/when it might become one.
  - Could be inflationary.

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So, Why Worry About It?

- **If debt continues to grow:**
  - Interest payments will grow with it.
    - 8% of spending in 2018.
    - 22% of spending in 2048.
    - Less room for using the budget for policy priorities.
    - 40% of payments go to other countries.
  - The longer we wait to address it, the harder and more disruptive addressing it will be.
  - Interest rates might increase.

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Economists' Views on the Debt Evolve

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Traditional View: 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.
      - When the young are old, their young will do the same for them.

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Traditional View: Four True Costs

- **Crowding out:**
  - The Treasury's borrowing needs compete with private borrowers, so debt and deficits raise interest rates.
- **Higher interest rates lead to foreign capital inflows or foreign borrowing.**
  - With foreign borrowing, some of the interest on the debt goes to foreign countries.
- **Larger primary surpluses are needed to stabilize the relative debt.**
  - The larger the relative debt, the bigger the needed primary surplus.
  - Thus higher taxes or programmatic outlays must be reduced.
- **Government bias toward higher inflation**
  - GDP grows if either prices rise or real output rises.

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Source: CBO, Federal Debt: A Primer, March 2020 pp.24-5

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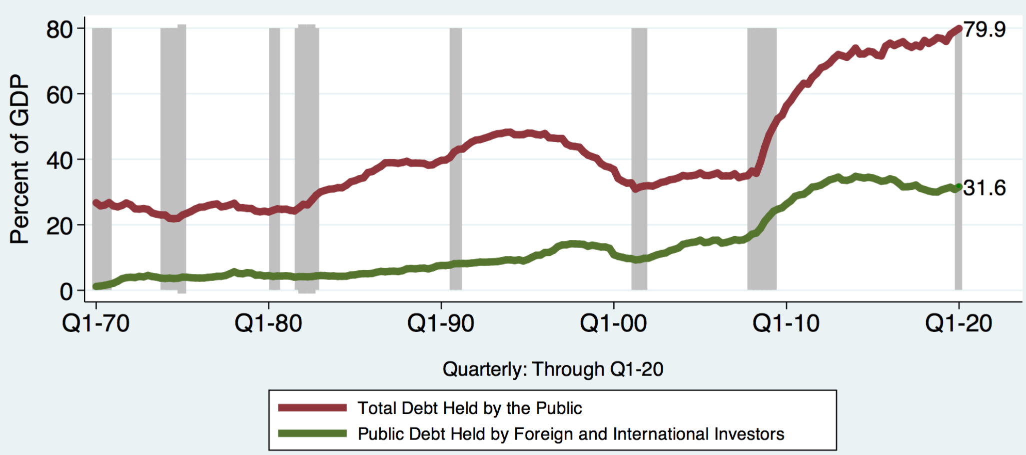
Traditional View: Cost 1

- **Rising debt reduces investment.**
  - Deficits and debt raise aggregate demand.
    - Direct government spending.
    - Lower taxes lead households to spend more.
  - To offset this increase in demand, the Fed has to raise interest rates, reducing investment and future GDP.
  - By causing interest rates to rise:
    - debt and deficits *"crowd out" investment*.

The International Appetite for US Treasuries



Source: NBER and US Office of Management and Budget
Gray shading indicates recession in 2 or more quarters of the year.
Graph by: National Economic Education Delegation (www.NEEDelegation.org)

2005: The International Dimension to Debt

- **Interest on foreign-held debt reduces US residents' welfare.**
  - Interest payments go to other countries.
- **When the Fed raises interest rates, the exchange rate of the dollar rises, causing:**
  1. Increases in the trade deficit
  2. Foreign borrowing.
- **Sharp increases in interest rates and the cost of imports raises the possibility of a fiscal crisis or a "run on the dollar."**

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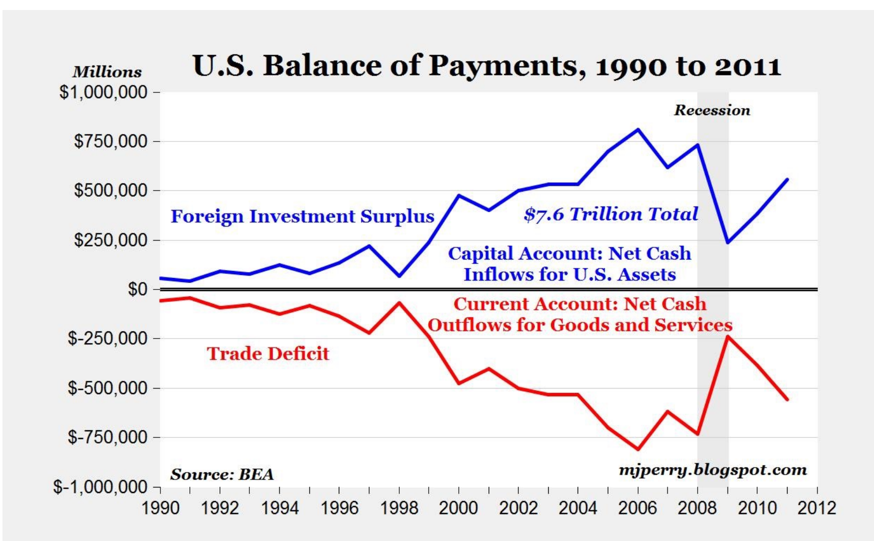
Trade and Investment Flows Balance Out



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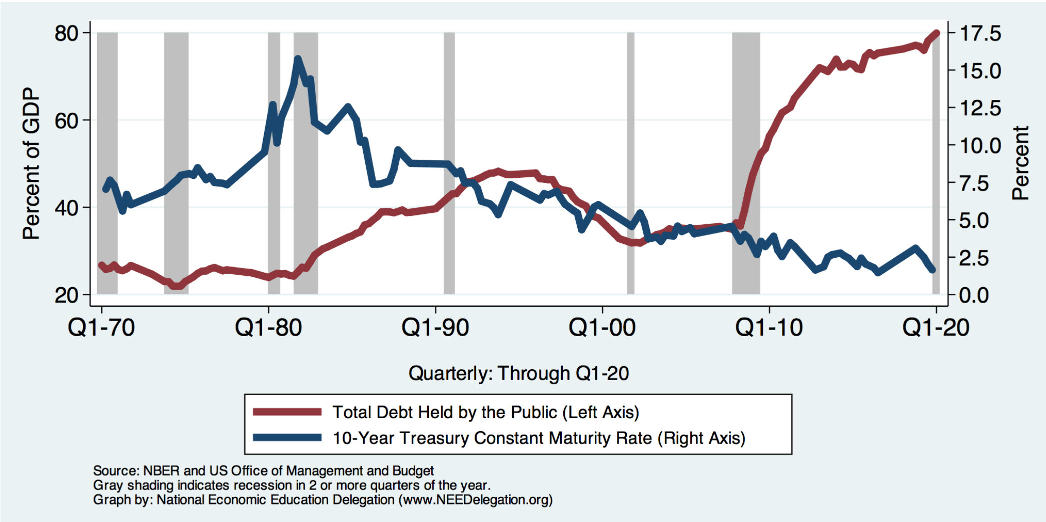
Costs 1–2: The Dog That Didn't Bark



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Traditional View: Cost 3

- **Rising debt reduces budgetary options.**
  - More debt means higher interest costs.
  - Higher interest causes greater relative debt which requires a bigger primary surplus to stabilize it.
  - Larger primary surplus means either higher tax rates or less government spending:
    - *"crowding out" of outlays and/or tax cuts.*

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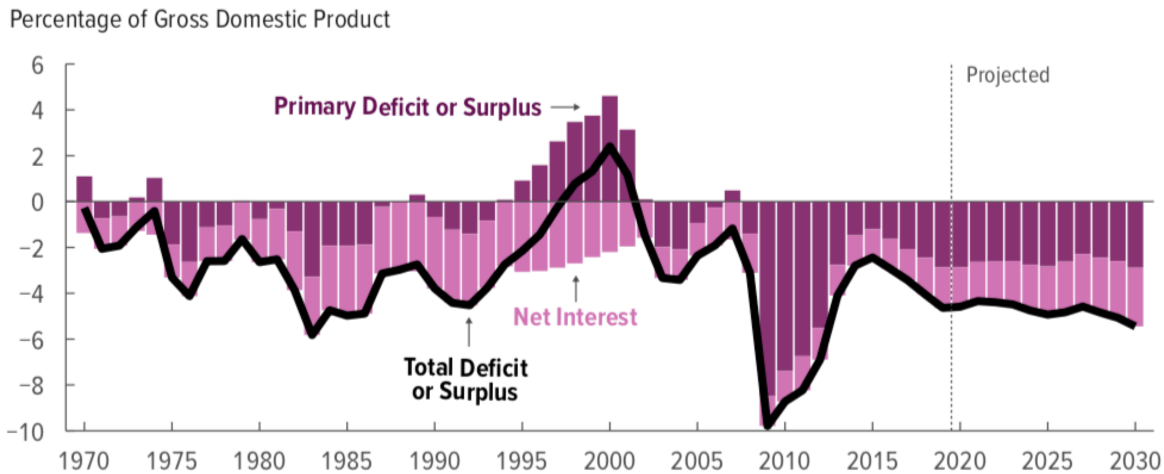
Cost 3: No Primary Surplus Since 2007!



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This graph was done before Covid-19

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

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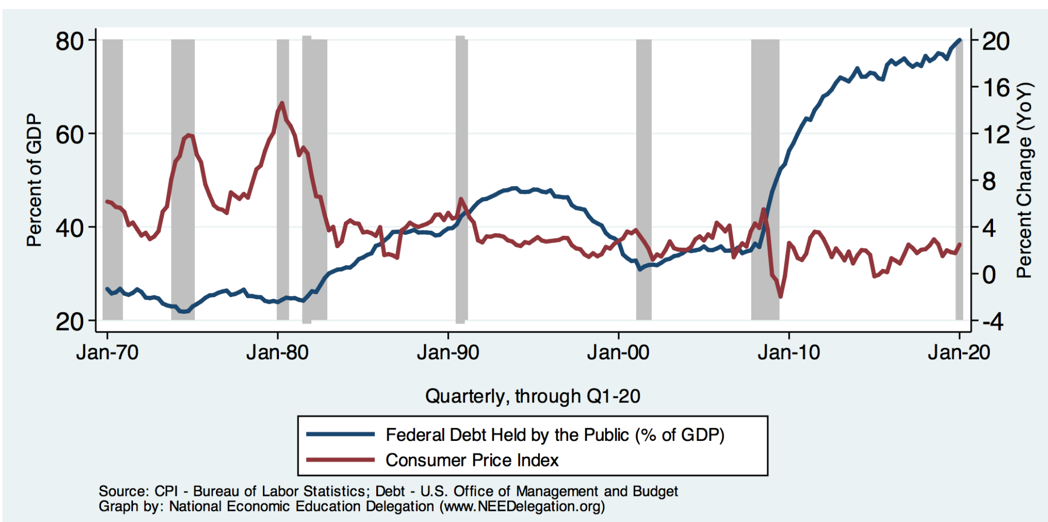
Cost 4: Anybody See Any Inflation?



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What the Traditional View Got Wrong

- **Stabilizing relative debt, debt/GDP, requires that the growth rate in debt equal the growth rate of GDP.**
- **The growth rate in debt has two parts:**
  1. The growth rate in interest on the debt, or just the interest rate.
  2. A contribution due to the primary surplus (–) or deficit (+).
- **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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An Almost Free Lunch

- **If the interest rate is *less* than the growth rate of GDP, then the contribution from the primary budget can be positive, or**
- **Debt to GDP can be stabilized with a (small) primary *deficit*.**

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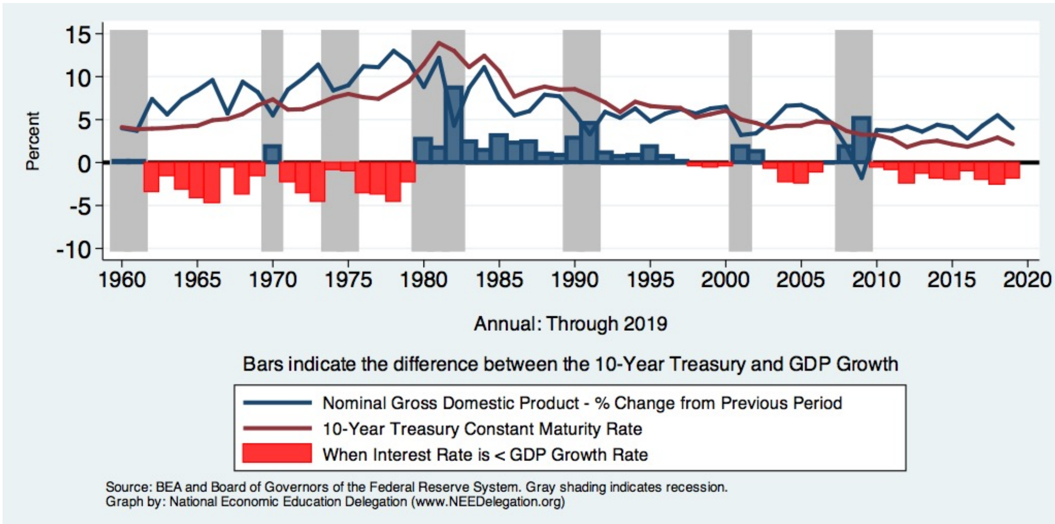
Evidence?



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The Key: Stabilization of Relative Debt

- Stabilization of relative debt might forestall the consequences of chronic deficits.
- Problem: The US federal debt is in no way stable.
- W/o stability, interest rates might rise, causing crowding out of:
  - policy priorities
  - domestic investment
- Budget surpluses are not necessary, but budget control is.

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A New and Possibly Catastrophic Cost

- **International investors can still lose if the exchange rate of the dollar falls.**
- **Remember, foreign holdings of public debt are 40 percent of the total.**

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Why Do Foreign Investors Buy US Treasuries?

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

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What Is a Fiscal Crisis?

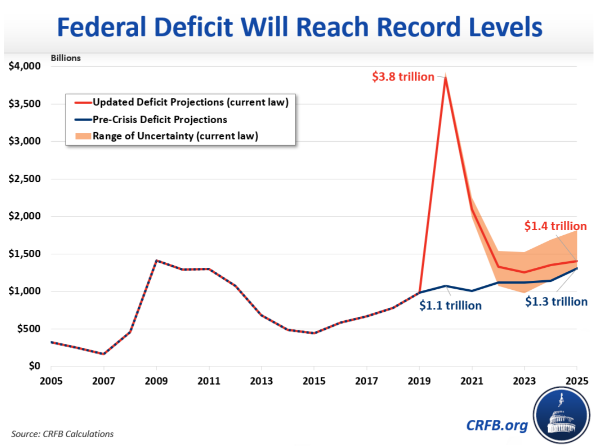
- **Increased perception of risk in government debt.**
- **Potential manifestations:**
  - Sudden major increase in interest rates
  - Plunging exchange rates
- **Why?**
  - Increased expectation of default
- **Potential results:**
  - Dramatic budget reforms may be quickly necessary to stave off actual default.
  - Recession from declines in:
    - investment (interest rates)
    - consumption (interest rates)
    - Government spending
  - Higher interest bill on existing debt

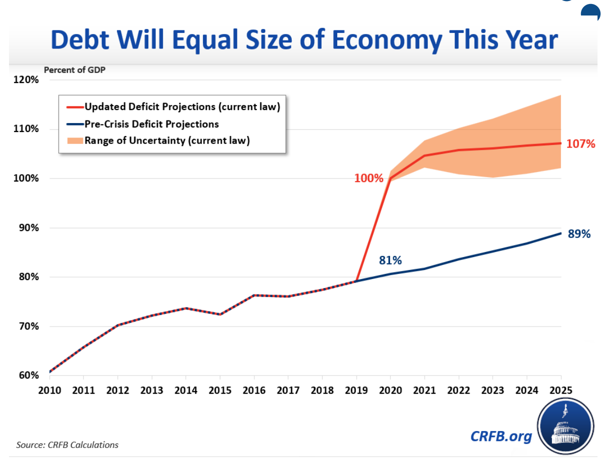
Bottom Line: We Need to Worry about the Debt

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

Now that the pandemic is over we must substantially reduce primary deficits.

Very Large Deficit!





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https://www.crfb.org/blogs/budget-projections-debt-will-exceed-size-economy-year

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How Do We Pay for This?

- Good News: Treasury interest rates are nearly 0.
- Bad News: The long-term budget outlook was already a mess.

Don’t worry about the drought when the house is on fire!

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CBO, “The Budget and Economic Outlet: 2020-2030,” 1/2020

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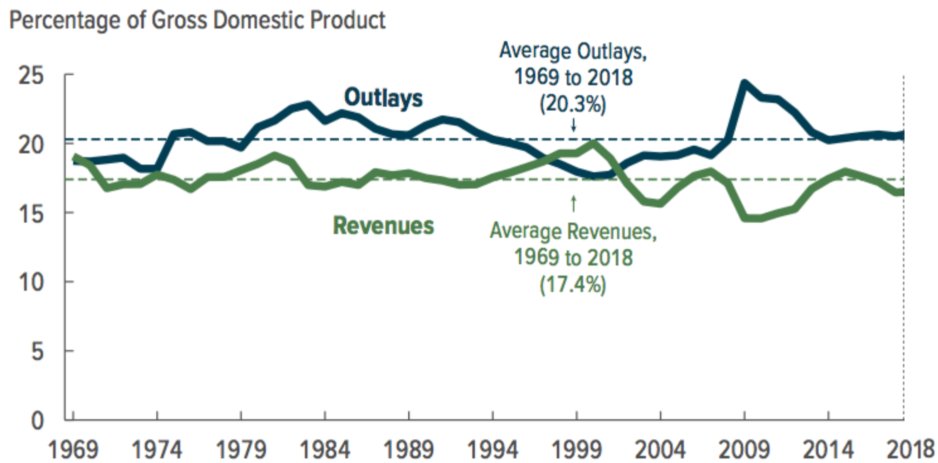
Why Has the Federal Debt Risen So Much?



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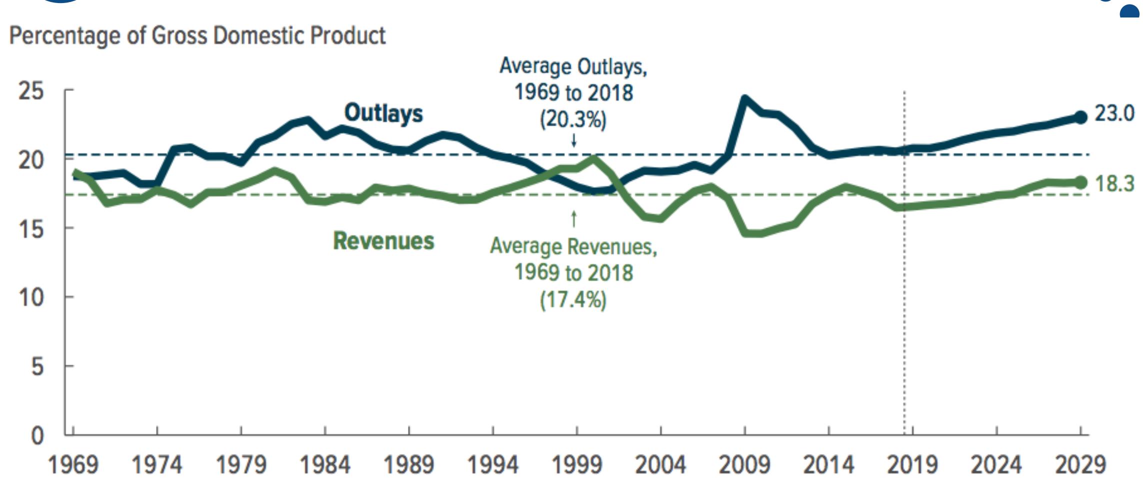

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Why Has the Federal Debt Risen So Much?

- **Expenditures:**
  - Social Security
  - Health-care costs
  - Economic stimulus
    - In particular, during the Great Recession.
  - Military engagements overseas
- **Revenues**
  - Declining income tax revenues
    - Stagnant wages
    - Tax cuts
  - Social security
    - Declining revenues
  - Corporate income taxes

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OK: Relative Debt Cannot Grow Forever, But

- **Does it matter at what level we stabilize relative debt?**
- **Relative debt stops growing:**
  - when the growth of debt is less the growth in GDP (on average).
- **Arithmetic: growth rate of the debt equals the interest rate plus the effect of the primary surplus or deficit.**
- **The bigger the relative debt, the smaller the effect of the primary surplus or deficit.**

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CBO on the Possibility of a Fiscal Crisis

- Moreover,
  - because the United States currently benefits from the dollar's position as the world's reserve currency and
  - because the federal government borrows in dollars,
  - a financial crisis—similar to those that befell Argentina, Greece, or Ireland—is less likely in the United States.
- Although no one can predict whether or when a fiscal crisis might occur or how it would unfold, the <u>risk is almost certainly increased by high and rising debt.</u>

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Source: CBO – Federal Debt: A Primer, March 2020

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Existential Threat: Coming This June!

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What is the Debt Ceiling?

- **An amount of debt that the federal government can not exceed without congressional approval.**
- **From the Constitution: only Congress can authorize the borrowing of money on credit of the United States** (Article I, Section 8)**.**
- **During WWI, requests came so fast and furiously, that Congress put in place the Debt Ceiling.**
  - Approvals then occurred only periodically.
- **And it continues today.**

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5 Things to Know about the Debt Ceiling

1. The debt limit has been raised continually for more than a century.
2. Raising the debt limit is not about new spending; it is about paying for previous choices policymakers legislated.
3. Only one other advanced country—Denmark—has a separate debt limit rule like ours (but theirs isn't binding).
4. Now that the debt hit the ceiling, the Treasury Department is using several extraordinary measures to postpone the day of reckoning.
5. The economic consequences of a large-scale, intentional default are unknown, but predictions range from bad to catastrophic.

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Souce: https://www.brookings.edu/2023/01/19/7-things-to-know-about-the-debt-limit/

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How Bad Could It Be?

Lessons from 1979 & 2011

- **Accidental partial default in 1979:**
  - Increased borrowing costs by $40 Billion!
- **Government shutdown was very costly:**
  - Stock markets plunged (17%).
  - Employment growth stuttered.
  - Treasuries – downgraded credit ratings.
  - Borrowing costs rose.

An Estimate of the Potential Damage:

- **Moody's Analytics has predicted that a prolonged breach could**
  - Cost up to 7 million jobs,
  - Drive unemployment up to 8%, and,
  - Wipe out $10 trillion in household wealth.

Takeways (Continued)

- **After the virus is defeated, some combination of spending cuts and tax increases must be enacted.**
- **The particular combination of spending cuts and revenue increases is a political question.**
- **But high debt levels should not deter:**
  - Productive infrastructure investment.
  - Fiscal responses to crises.
- **Given the fiscal challenges of an aging population and climate change, it is better to do this sooner rather than later.**

Bottom Line

- Question is not ***WHETHER*** the US will have to act…

  but ***WHEN***.

- Some combination of the following ***WILL*** be necessary:
  - **Raising taxes**
  - **Cutting spending**
  - **Reining in health-care costs**

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Are There Reasons to Wait?

- **Very little evidence of:**
  - Crowding out
  - Inflationary impact
- **Uncertainty about the future**
  - Economic growth might render action today unnecessary.
- **There are a great many investments to be made by the govt.**
  - Infrastructure
  - Education
  - Much, much more …

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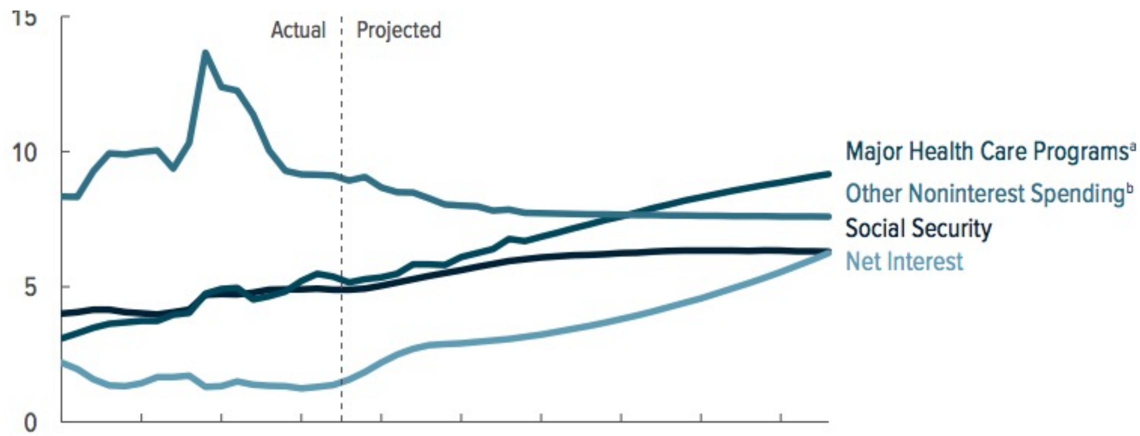
What Are the Primary Drivers Going Forward?



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Summary: Address the Debt?

- **Risks:**
  - Inflation
  - Slower economic growth
    - Higher interest rates
    - Crowding out
  - Default

- **Reasons to wait:**
  - Interest rates are very low
  - Lots of important investments to make
  - Economic growth may take care of it

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Bottom-Line Takeaways

- **Relative debt must be stabilized, so it is imperative to reduce primary deficits after the virus has been defeated.**
- **Given the fiscal challenges of an aging population and climate change, it is better to do this sooner rather than later.**
- **But high debt levels should not deter:**
  - Productive infrastructure investment.
  - Fiscal responses to crises:
    - "When the house is on fire, you don't worry about being in a drought; you just put it out."

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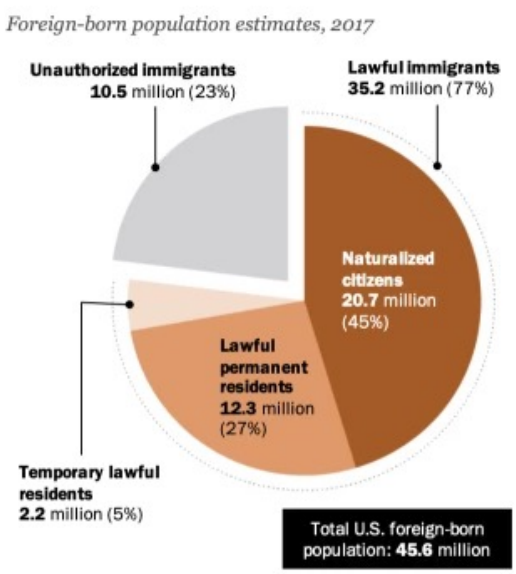
Immigration: Jon Haveman, NEED

Categories of the total number of immigrants in the United States.



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https://www.pewresearch.org/fact-tank/2019/07/12/how-pew-research-center-counts-unauthorized-immigrants-in-us/

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Thank you!

Any Questions?

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