

Osher Lifelong Learning Institute, Spring 2019
**What Economists Know About Important
Policy Issues**

Lecture 2: The Federal Budget

March 26, 2019

Jon Haveman, Ph.D.
National Economic Education Delegation

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.

Polishing Off Lecture 1



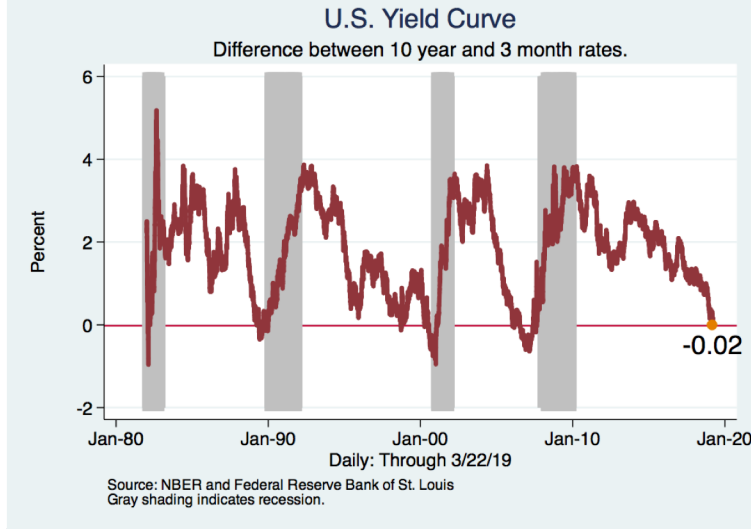
Things to Be Worried About

- **Stock Markets**
- **Yield Curve**
- **Government Debt**
- **Declining Labor Force**
- **Income and Wealth Inequality**
- **Policy Uncertainty**
 - Trade and immigration policy, especially



Alarming Compression of Interest Rates

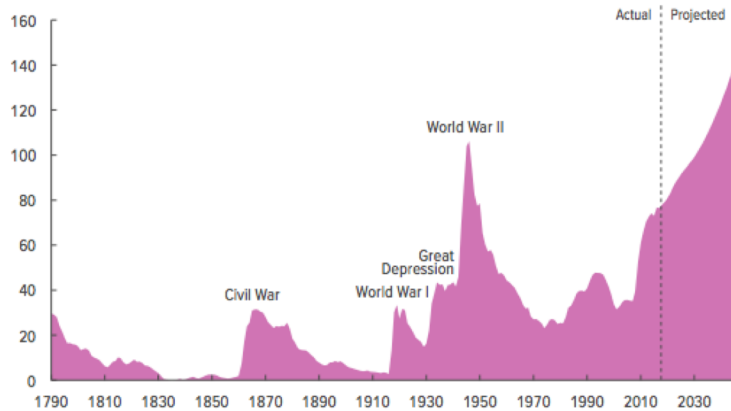
Inverted Yield Curves (negative values) Have Projected Recent Recessions



Federal Government Debt Projections

Federal Debt Held by the Public

Percentage of Gross Domestic Product



High and rising federal debt would reduce national saving and income, boost the government's interest payments, limit lawmakers' ability to respond to unforeseen events, and increase the likelihood of a fiscal crisis.

Source: Congressional Budget Office.

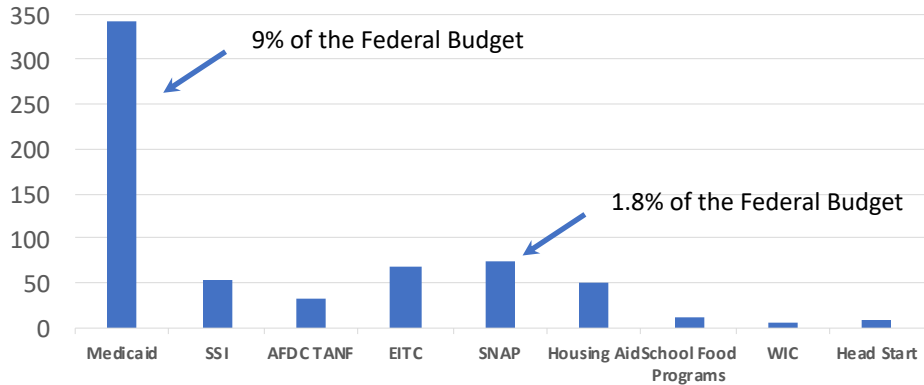
Overall Summary

- **Tailwinds and headwinds both exist**
 - 2019 and 2020 forecasts are increasingly pessimistic.
- **There remains room for the economy to grow**
 - Labor force growth is available.
 - Consumption has room to grow, but there is evidence of slowing.
 - Business investment may be slowing.
 - Return to productivity growth? But how? What's the next big idea?
- **Long term concerns unaddressed**
 - Demographics, climate change
 - Federal government debt
 - International trade policy

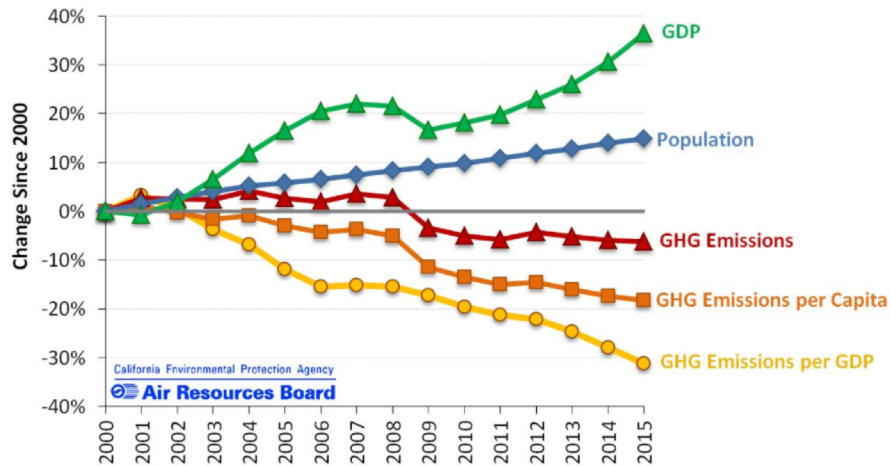
Teasers: Upcoming Lectures

- **Government Budgets**
- **Social Safety Net**
- **Climate Change**
- **Income Inequality**
- **Trade and Globalization**
- **Housing Policy**

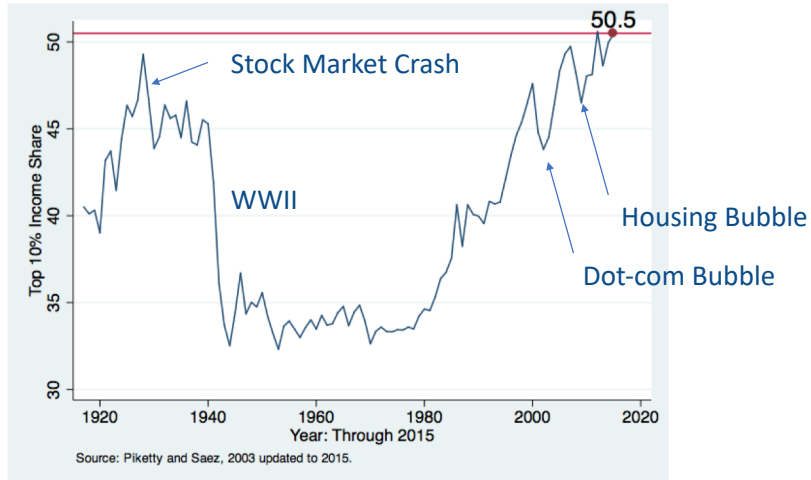
U.S. Safety Net Programs, Federal Expenditures 2014 or 2015 (\$ Billions)



Change in California GDP, Population, and GHG Emissions since 2000

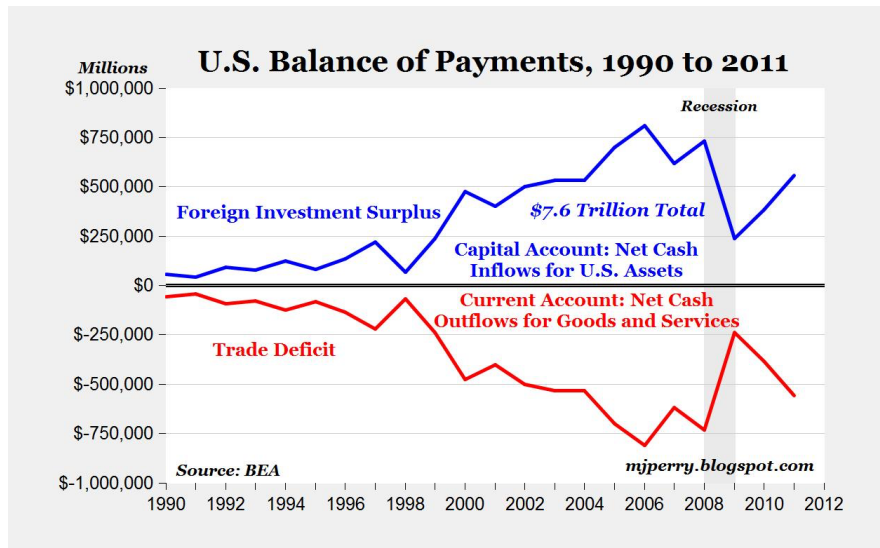


National Income Inequality: Share of Top 10%

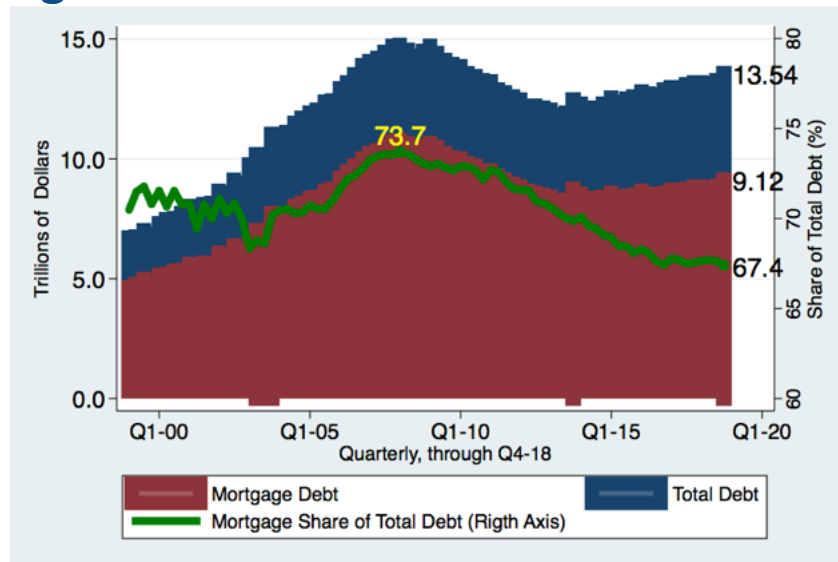


Source: Piketty and Saez, 2003 updated to 2015. Series based on pre-tax cash market income including realized capital gains and excluding government transfers.

I Don't Care About the Trade Deficit



Housing Debt



Federal Budget

Lecture 2

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

2018 Budget Summary

Revenue	Billions	Expenditures	Billions
Income Taxes	\$1,684	Mandatory	\$2,520
Payroll Taxes	\$1,171	Discretionary	\$1,263
Corporate Taxes	\$205	Interest	\$325
Other	\$270		
Total	\$3,329	Total	\$4,108

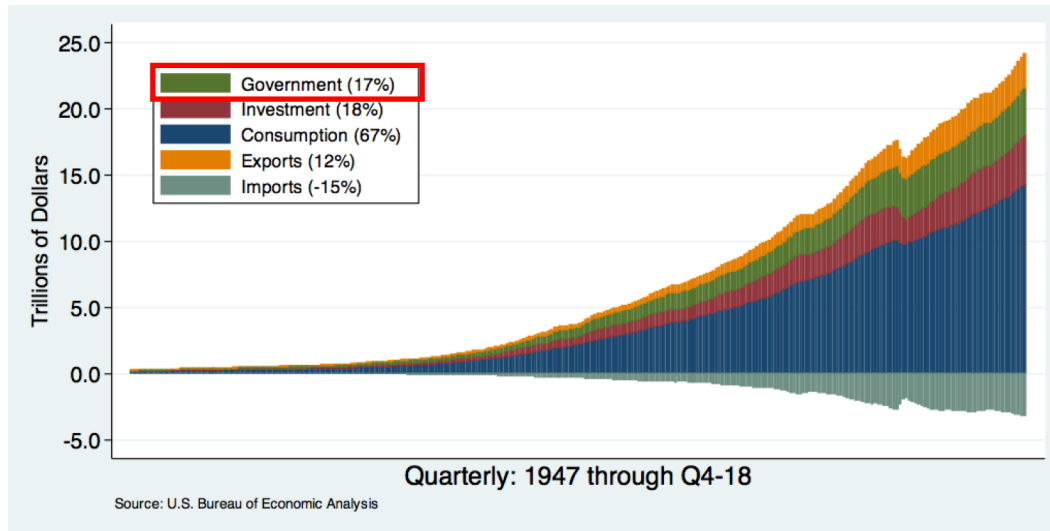
Budget Deficit **\$779 Billion**

Outline

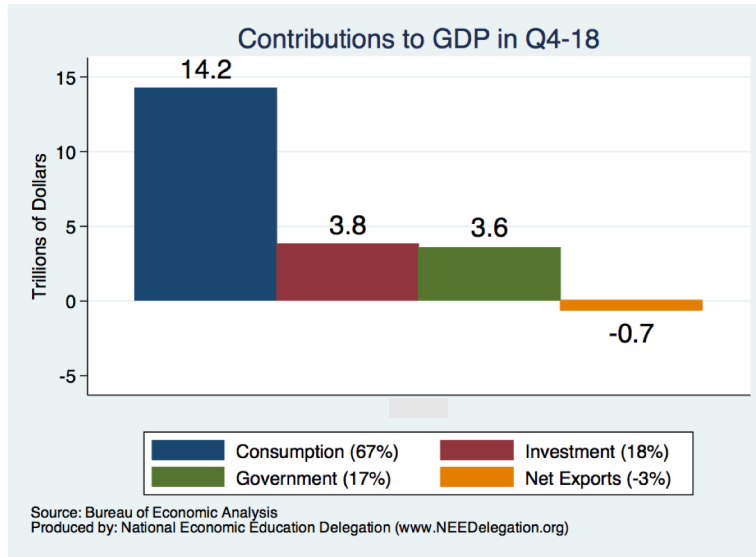
- Government Spending
- Government Revenues
- Government Debt

U.S. Government Spending

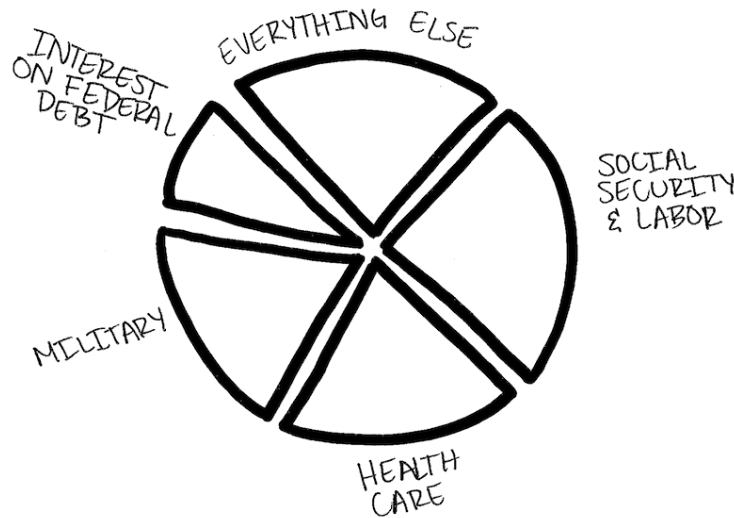
Government Spending and the US Economy



Recent Amounts

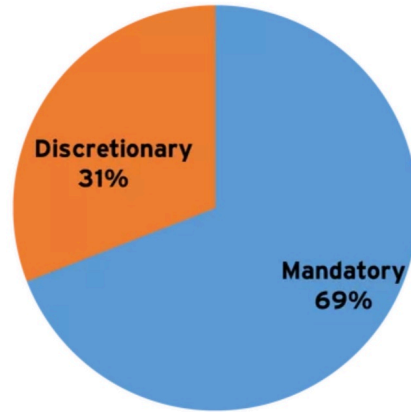


Where Does the Money Go?



Two Important Categories

COMPOSITION OF FEDERAL SPENDING (2018)

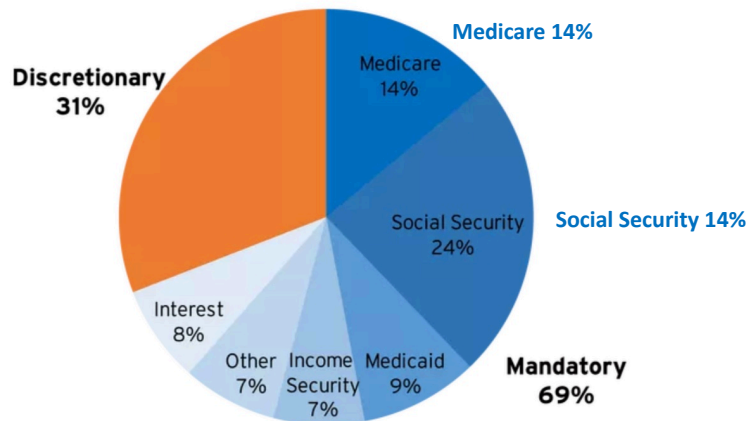


Source: Congressional Budget Office, Haver

Hutchins Center on Fiscal & Monetary Policy at BROOKINGS

What is Mandatory Spending?

COMPOSITION OF MANDATORY SPENDING (2018)



Source: Congressional Budget Office, Haver

Hutchins Center on Fiscal & Monetary Policy at BROOKINGS

Mandatory Spending: Social Security (24%)



- **Retirement**
 - Covers 96% of US workers.
 - Retirement age is increasing from 65-67.
- **Survivors**
 - A worker's spouse and dependents may be eligible for survivors' benefits if the worker dies.
- **Disability**
 - A medical condition expected to last at least one year or to be fatal.



Where Do Social Security Funds Come From?

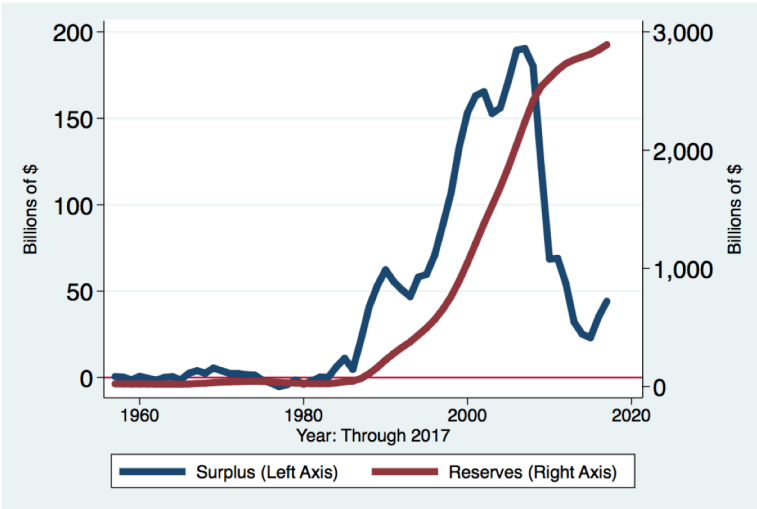
- **Payroll taxes**
 - Tax rates:

○ Employee:	6.2%
○ Employer:	6.2%
○ Self Employed:	12.4%
 - Cap in 2019: \$132,900
- **Taxes on OASDI benefits**
 - Not all benefits are taxed.
- **Interest earnings**

**Key Question:
Who pays?**



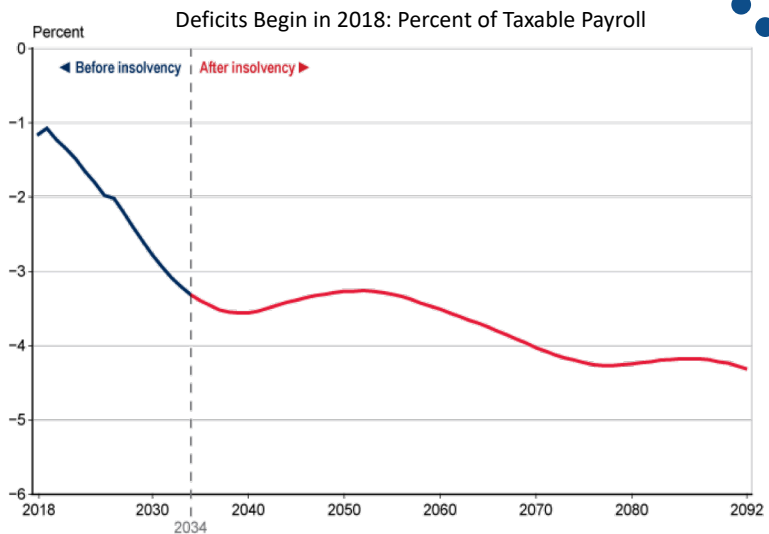
Social Security Trust Fund



- **Spending in 2017**
 - OASI: \$807 billion
 - DI: \$146 billion
- **Income in 2017**
 - OASI: \$826
 - DI: \$171
- **Surplus in 2017**
 - OASI: \$19
 - DI: \$25
- **Total Surplus: \$44 Billion**

In 2018: Deficits As Far As the Eye Can See

- **Trust Fund Solvency**
 - Annual deficits after 2017
 - Fund insolvent after 2034



Options for Eliminating the Deficits

- Raise the retirement age
- Increase the tax rate
- Raise the amount of income subject to tax
- Reduce benefits



Mandatory Spending: Medicare (14%)

- Part A: Hospital Insurance
- Part B: Physician, outpatient, home health, and other services.
- Part D: Subsidized access to pharmaceuticals.
- Part C: Medicare Advantage Plans – offered by private companies approved by Medicare.
 - Medicare Advantage Plans may offer extra coverage, such as vision, hearing, dental, and/or health and wellness programs.



Where Do Funds Come From?

- **Payroll taxes**
 - Tax rates:
 - Employee: 1.45%
 - Employer: 1.45%
 - Self Employed: 2.9%
 - No Cap
- **Interest earnings**
- **General revenues**
- **Beneficiary premiums**

Medicare Finances in 2018

- **Part A:**
 - Income in 2018: \$299 billion
 - Expenses in 2018: \$297 billion
 - Surplus: \$2.8 billion
- **Part B and Part D:**
 - Income in 2018: \$406 billion
 - Expenses in 2018: \$414 billion
 - Surplus: \$-7.9 billion
- **Long term sustainability:**
 - Deficits began in 2016
 - For as far as the eye can see

Mandatory Spending: Medicaid (9%)

- Medicaid provides medical insurance for those whose income and resources are insufficient to pay for health care.
- It is a program with costs shared with the states.
- Amount spent in 2017: \$576.6 Billion
 - Federal: 61.5% or \$354.6 Billion
 - States: 38.5% \$222.0 Billion
- People served in 2017: 72 million (22% of Americans)

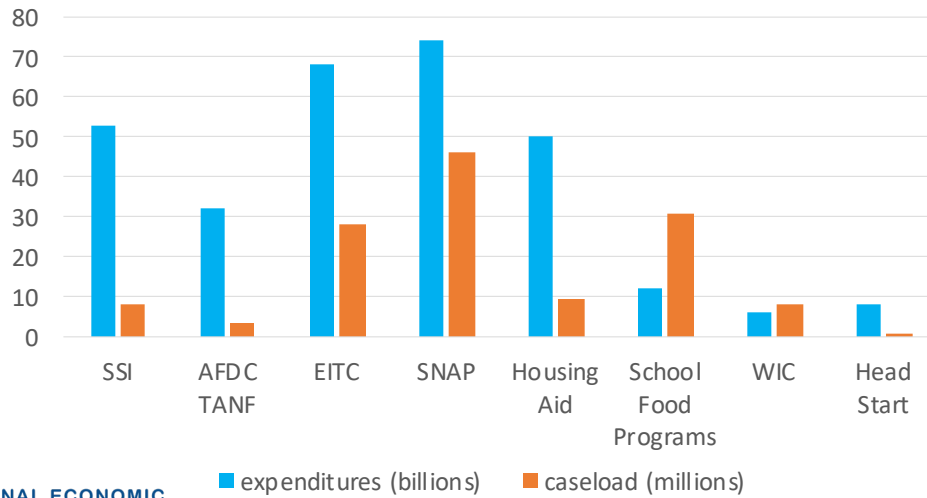


Mandatory Spending: Income Security (7%)

- EITC
- SNAP
- SSI
- TANF
- Housing
- WIC
- School Lunches
- Head Start

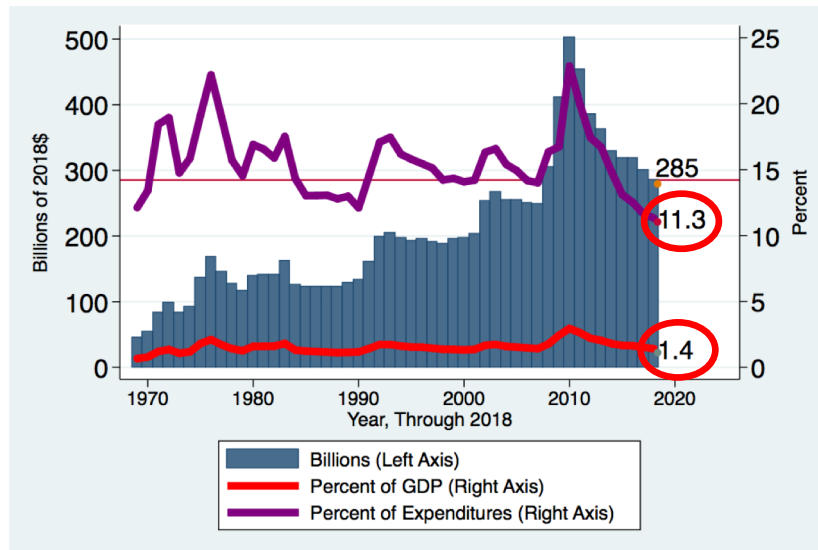


U.S. Safety Net Expenditures (\$ Billions) and Caseload (Millions) – No Medicaid, 2014 or 2015



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Income Security Spending Over Time



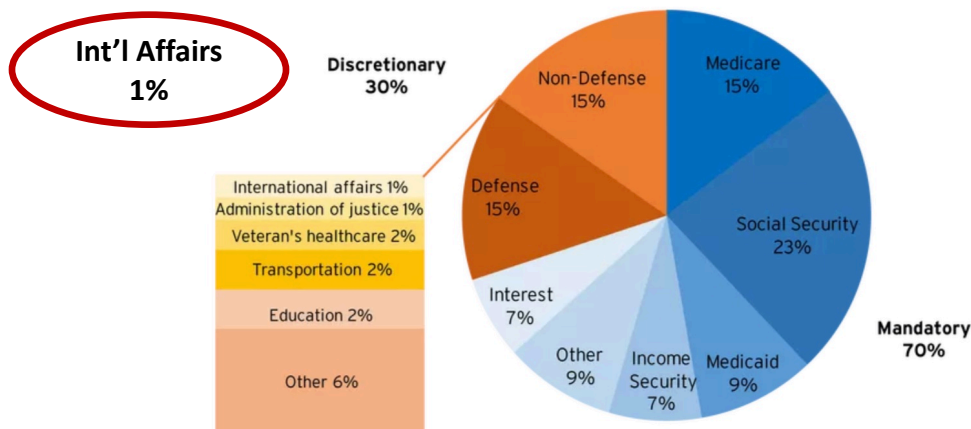
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Mandatory Spending: Interest (8%)

- **Interest costs in 2018: \$325 Billion**
- 1.6% of GDP, or 8% of the Federal Budget
- **Forecast to increase to \$928 Billion in 2029**
- 3.0% of GDP, or 22% of the Federal budget

What is Discretionary Spending?

COMPOSITION OF DISCRETIONARY SPENDING (2017)

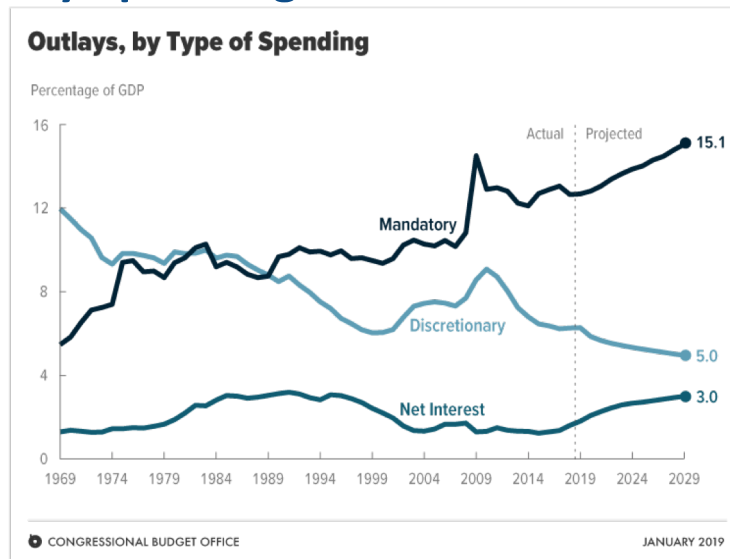


Source: Congressional Budget Office, Haver. Data are for 2017.
Note: Numbers may not add up due to rounding.

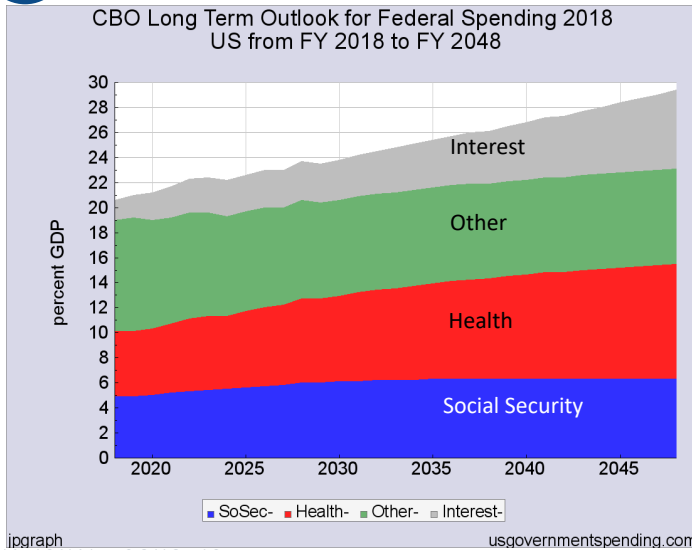
Discretionary Spending: Other (6%)

Category	Amount
Energy	4,412
Agriculture	5,800
Medicare	5,906
General government	17,403
General science, space and tech	30,289
Natural resources and environment	36,766
Housing Assistance	45,711
Health	60,326

Mandatory Spending Dominates Forecasts



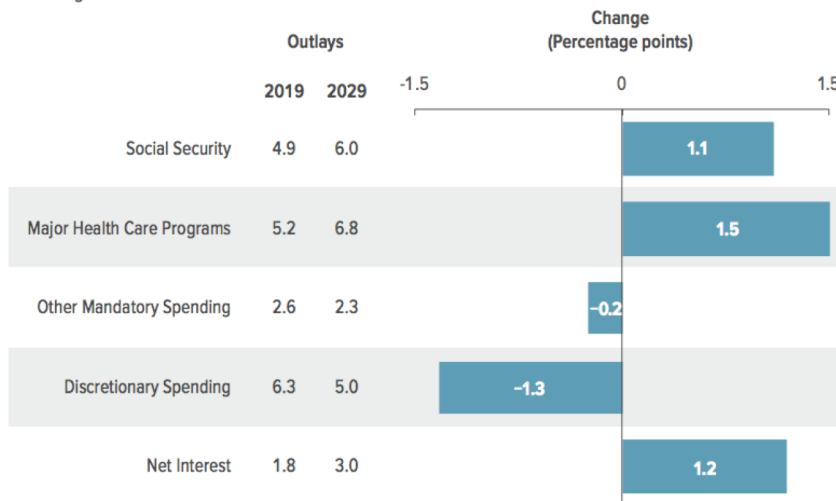
Forecast Spending



What trends do you see?

Aging and Health Care Costs

Percentage of Gross Domestic Product



See Figure 3-2

Another Category of Spending: Tax Expenditures

- **Description**

- Social policies that are implemented and paid for through the tax code.

- **List of the largest tax breaks:**

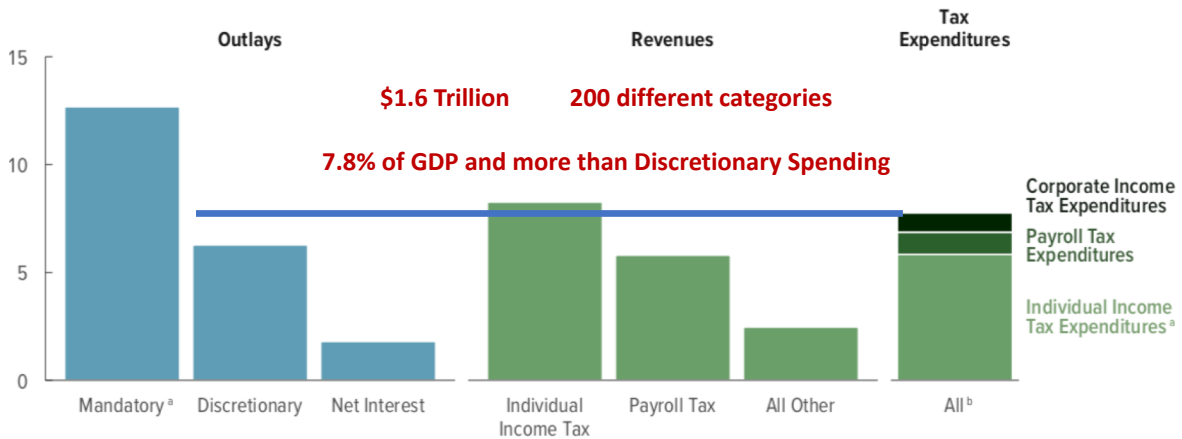
- Mortgage interest deduction
- Retirement contributions
- State and local taxes
- Health insurance
- Low tax rates for Capital Gains
- Child related tax credits
- Charitable gifts
- Lifetime Learning

- **Evidence of who they benefit**

- Regressive

Tax Expenditures are Significant

Percentage of Gross Domestic Product



Tax Expenditures Tend to be Regressive

Percent Change in After-Tax Income due to Tax Expenditures, 2007 (with no AMT)*							
	Tax Exclusions	Lower capital gains and dividends rates	Itemized deductions	Above-the-line deductions	Non-refundable credits	Refundable credits	All provisions
Bottom 20 percent	0.54%	0.00%	0.02%	0.01%	0.05%	5.81%	6.97%
Second 20 percent	Income Group		Benefits			5.26%	8.89%
Middle 20 percent	Bottom 20%		7.0%			7.25%	7.25%
Fourth 20 percent						1.00%	7.28%
Top 20 percent	Top 20%		12.8%			0.29%	12.82%
Total Cost (no AMT)	\$326 billion	\$99 billion	\$153 billion	\$6.6 billion	\$11.3 billion	\$89 billion	\$746.7 billion
Total Cost (with AMT)	\$344 billion	\$96 billion	\$154 billion	\$6.4 billion	\$8.2 billion	\$89 billion	\$760.5 billion

Source: Center on Budget and Policy Priorities calculations based on TPC calculations of effect of eliminating tax expenditures.
*Note: These figures take into account the interaction among individual tax expenditure provisions.

Important things that people get from govt

- Roads and highways
- Public education
- Defense
- Research and development
- Space exploration
- Income Security
- Improved public health
 - Sanitation
- Investments in communications
- Energy
- Many, many, inventions
 - Microchips
 - GPS
 - Wind turbines
 - Tang
 - Touch screens
 - Internet
 - Bar Codes
 - Wii

US Government Revenues

Federal Government Revenues in 2017

Funds collected from the public that arise from the government's exercise of its sovereign powers

AT A GLANCE

\$3.3
Trillion

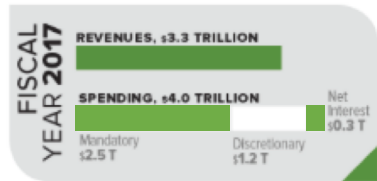
Revenues received by the federal government in **2017**

\$1.6
Trillion

Receipts from individual income taxes, the largest source of revenues, in **2017**

17.3%

Revenues as a percentage of gross domestic product in **2017**



U.S. GDP: \$19.5 Trillion

International Comparison

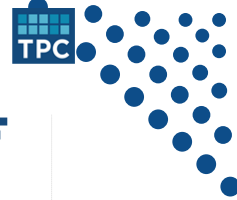
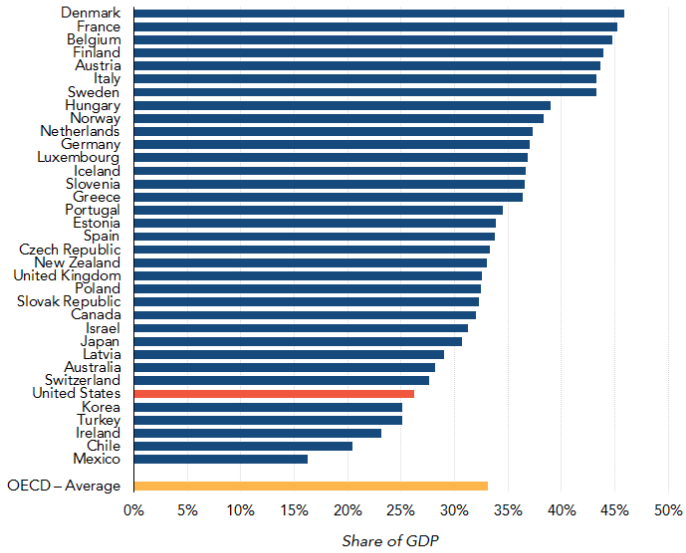


FIGURE 1
Total Tax Revenue
 Organisation for Economic Co-operation and Development (OECD) countries, 2015

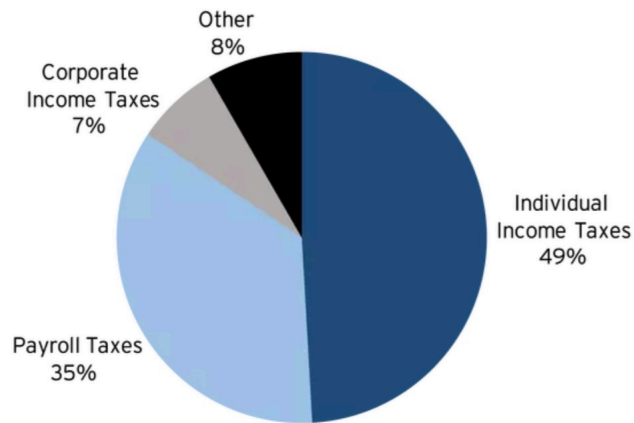


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Source: Organisation for Economic Co-operation and Development. 2015. OECD Tax Statistics. "Revenue Statistics: OECD Countries—Comparative Tables."
 Note: The "OECD - Average" is a weighted average by GDP for all countries excluding the United States.

Where Do Government Revenues Come From?

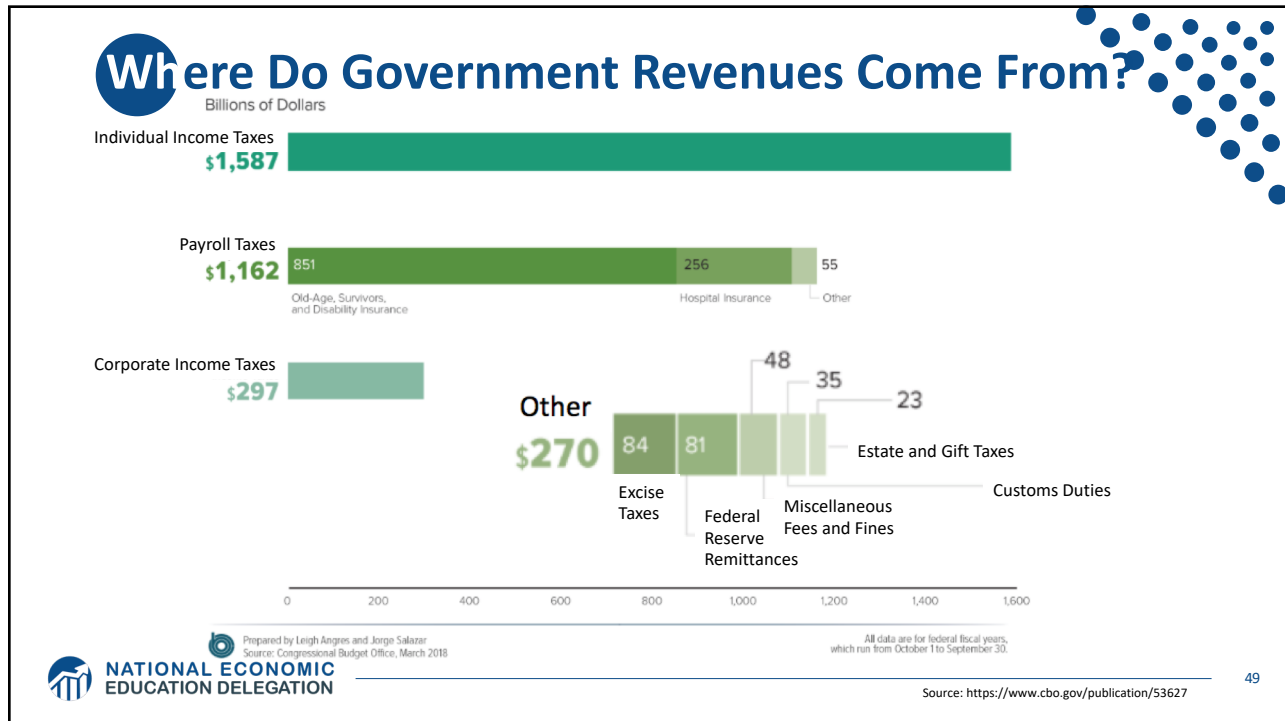
COMPOSITION OF REVENUES (2018)



Source: Congressional Budget Office, Haver

Hutchins Center on Fiscal & Monetary Policy at BROOKINGS

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Individual Income Taxes

- **Marginal tax rates**
- **Not all income is subject to the same tax rates**
 - capital gains
- **Deductions**
 - Talked about as Tax Expenditures

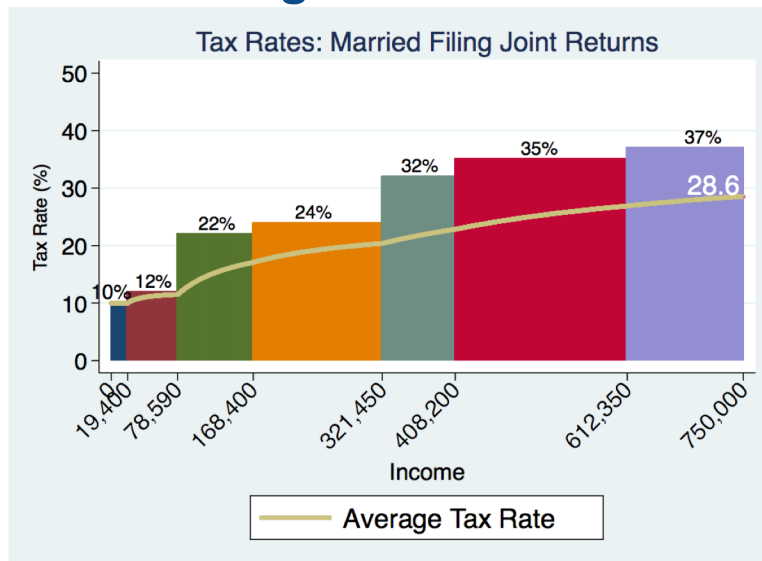


Marginal Tax Rates: Married Filing Jointly

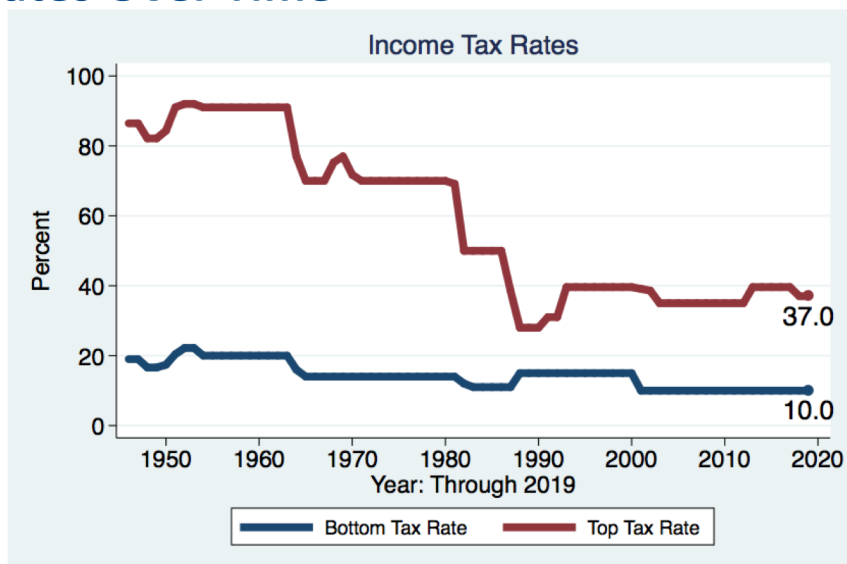
- Income is taxed differently at different levels.
- Individuals are taxed the same way, regardless of overall income:
 - First dollar is taxed at 10%
 - 19,401st dollar is taxed at 12%
 - Millionth dollar is taxed at 37%

Income Above	Tax Rate
0	10%
19,400	12%
78,590	22%
168,400	24%
321,450	32%
408,200	35%
612,350	37%

Marginal and Average Tax Rates: 2019



Tax Rates Over Time



Why do we have a Progressive Tax System?

• Our options are:

- Progressive: increasing average tax with income
- Neutral or flat: same share of income at all income levels
- Regressive: decreasing average tax of income

• Additional income is of greater consequence to those with lower incomes.

• Other parts of the tax system are regressive.

Capital Gains Taxes (2018)

- **Capital gains taxes can apply on investments, such as stocks or bonds, real estate (though usually not your home), cars, boats and other tangible items.**
- **Short term or long term**
 - Held for more or less than a year
- **Graduated rate**
 - 0% < \$38,600
 - 15% \$38,601 - \$425,800
 - 20% \$425,801+



Revenues: Other (8%)

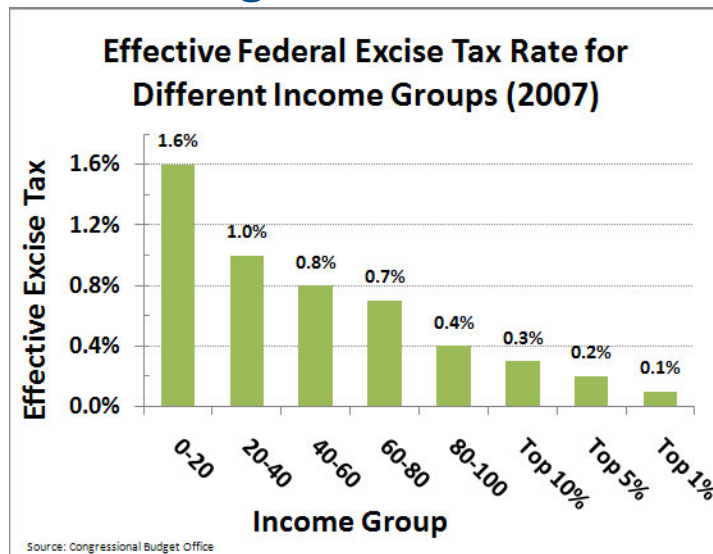
- **Federal Reserve Remittances**
- **Miscellaneous Fees and Fines**
- **Customs Duties**
- **Estate and Gift Taxes**
- **Excise Taxes**
 - Motor fuel
 - Airline tickets
 - Tobacco
 - Alcohol
 - Health-related goods



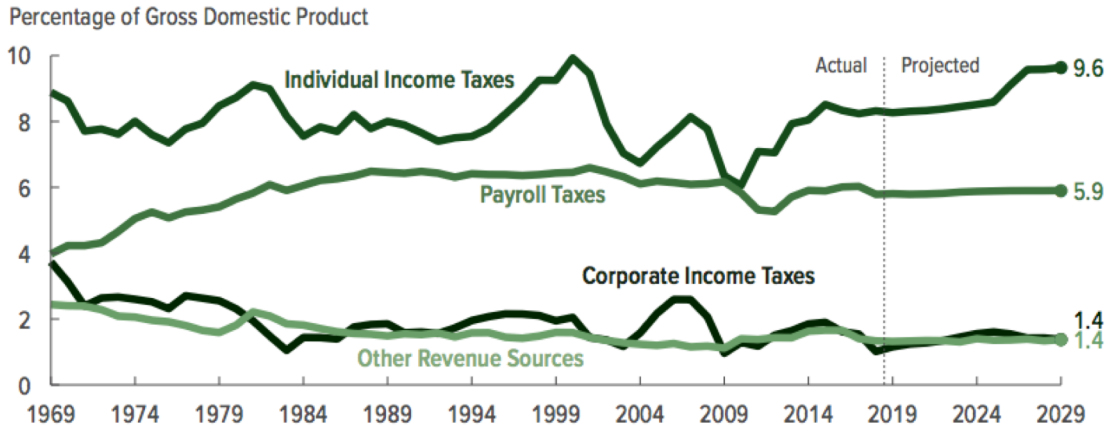
Estate Taxes

- \$23B in revenues in 2018
- Exemption: \$11.2 million for singles \$22.4 million for couples
- Tax rate: 40%
- Top 10% pay more than 90%, Top 1% pays nearly 40%
- 1,900 estates
- Businesses and farms: 140 subject to tax
 - No Small businesses or farms because of the \$11.2 million exemption

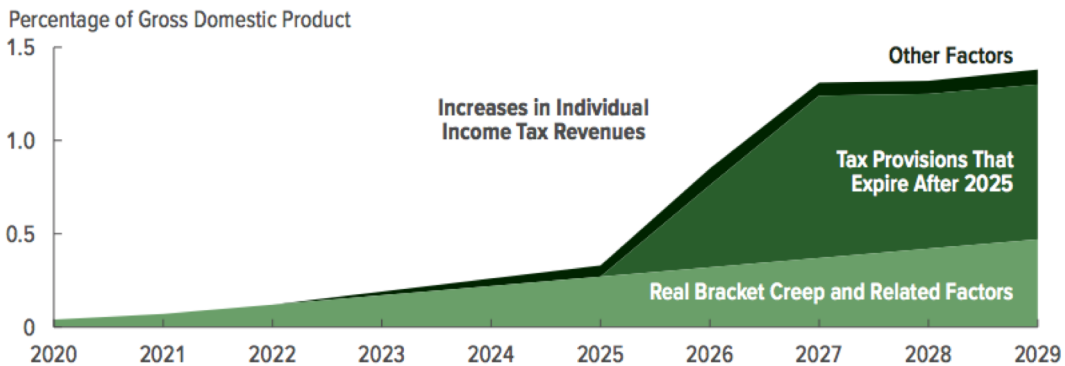
Excise Taxes are Regressive



Revenue Sources: Share of GDP over Time

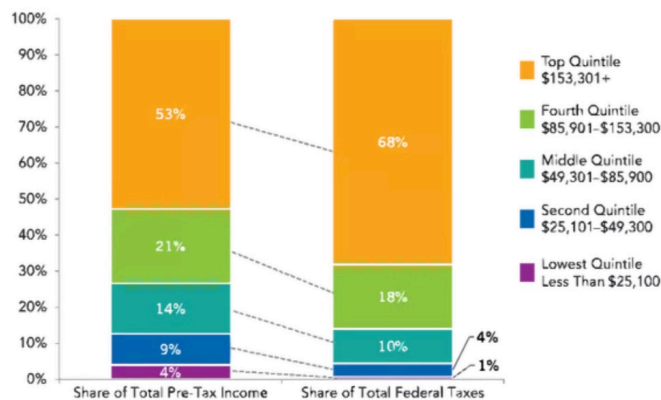


What's with the Bump up in Income Taxes?



Who Pays?

The top 20% of households get more than half of all pre-tax income and pay an even larger share of all federal taxes



SOURCE: Tax Policy Center, Baseline Distribution of Income and Federal Taxes, August 2018. Data are for 2018. Compiled by PGPF.
NOTE: Federal taxes include excise tax, estate tax, corporate income tax, payroll tax, and individual income tax. Quintiles are defined by households' expanded cash income in 2018. Each quintile contains one fifth of the population.

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The Bottom 40% Don't Pay Income Taxes

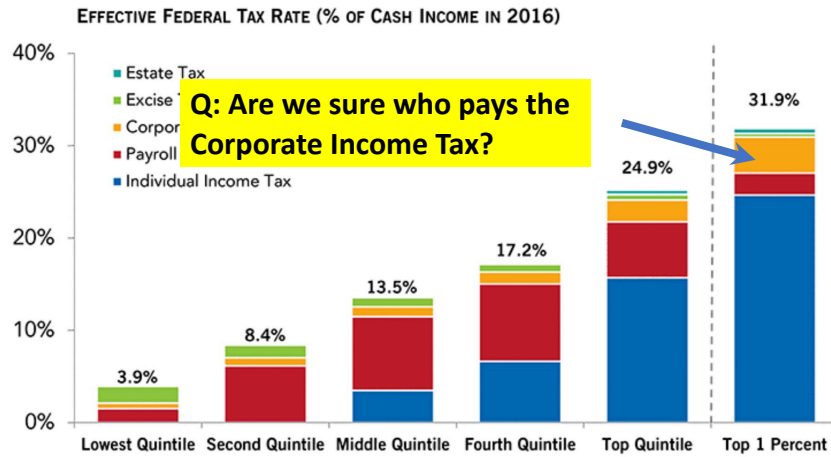
- There is a common narrative that the bottom 40% don't pay income taxes.
- But they pay other taxes and they also pay state and local taxes
 - Payroll,
 - State and local taxes
 - Excise taxes – see the slide 4 slides ago
- Does it matter from what tax revenues are derived?
- Should the income tax be used to make the system progressive?



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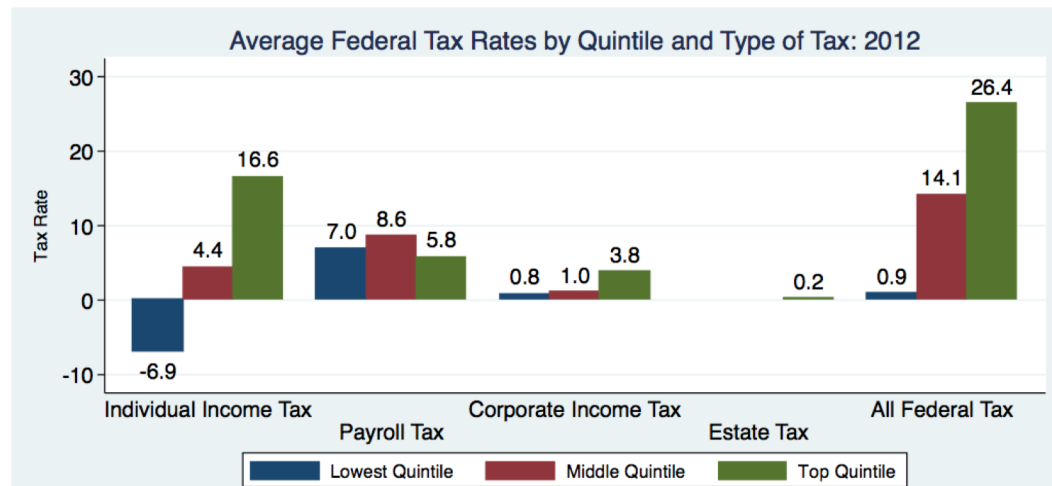
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The Bottom 40% Does Pay Other Taxes



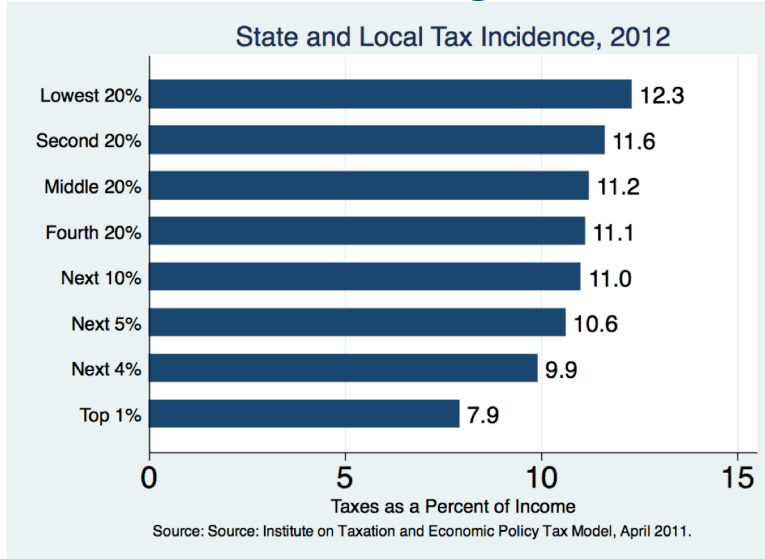
SOURCE: Tax Policy Center, *Effective Federal Tax Rates By Expanded Cash Income Percentile*, March 2017. Data are for 2016. Compiled by PGPF.
 NOTE: Individual income tax rates for the lowest and second lowest quintiles are negative and are netted against the payroll tax rate. A quintile is one fifth of the population. In 2017 dollars, the income breaks are: 20% \$24,600; 40% \$47,700; 60% \$84,300; 80% \$147,700; 99% \$717,900. Includes both filing and non-filing units but excludes those that are dependents of other tax units.

Regressivity in Federal Taxes?

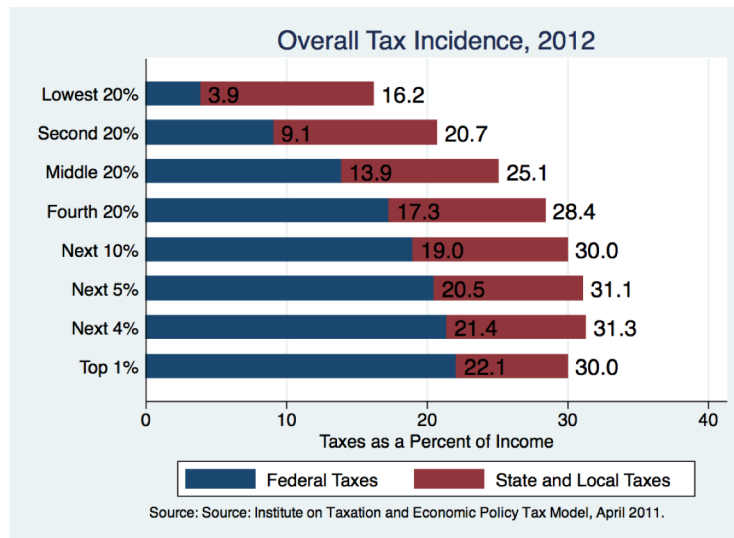


Source: Taxes and Inequality, Leonard Burman, Urban Institute, 2014.

State and Local Taxes are Regressive



Overall, Taxes are (mostly) Progressive



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

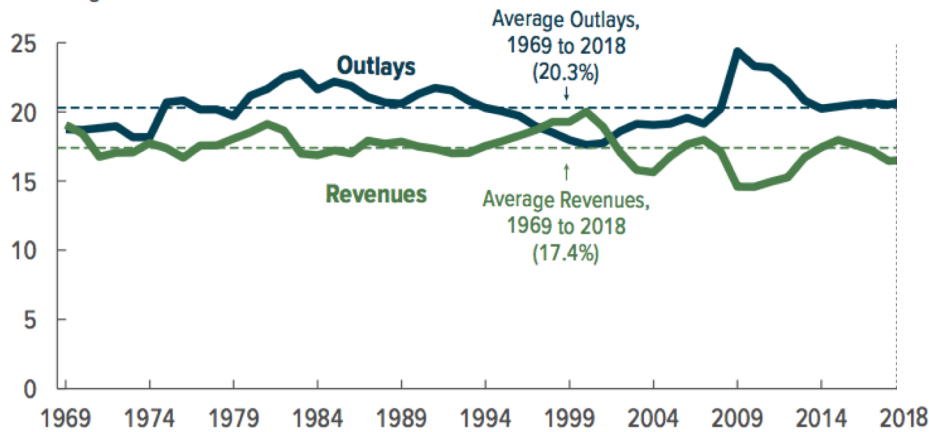
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Budget Deficit **\$779 Billion**

How has the Size of Government Changed?

Percentage of Gross Domestic Product



Budget Summary: Slide 1

- **Total Spending: \$4.1 Trillion in 2018**
- **There is remarkably little discretion in the budget:**
 - Mandatory: 69%
 - Discretionary 31%
- **Fastest growing parts of the budget: Health Care and Interest**
- **By 2048:**
 - Debt is forecast to grow to 150% of GDP, from 80% today
 - Interest payments are forecast to grow from 8% to 22% of budget



Budget Summary: Slide 2

- **Categories that get a lot of attention are relatively small**
 - Foreign Aid: 1% of the budget
 - Income support/welfare: 8.7%
- **Or are not forecast to grow significantly**
 - Social security
 - Most other categories of spending



Budget Summary Slide: Tax Expenditures

- Are policy enacted through the tax code.
- Are not explicitly on the books.
- They add > 25% to actual government expenditures.
- Reduce the progressive nature of the tax code.
- Are larger than all of “Discretionary Spending”.



Government Debt



How Does the U.S. Government Borrow?

- **It issues debt**

- Treasury marketable securities:
 - Treasury bills, notes, and bonds
 - TIPS: Treasury inflation-protected securities

- **Who buys the debt?**

- Other federal government agencies
- Individuals and businesses
- State and local governments
- People, businesses, and governments from other countries.



Of Debt, Deficits, and Surpluses

- **STOCK**

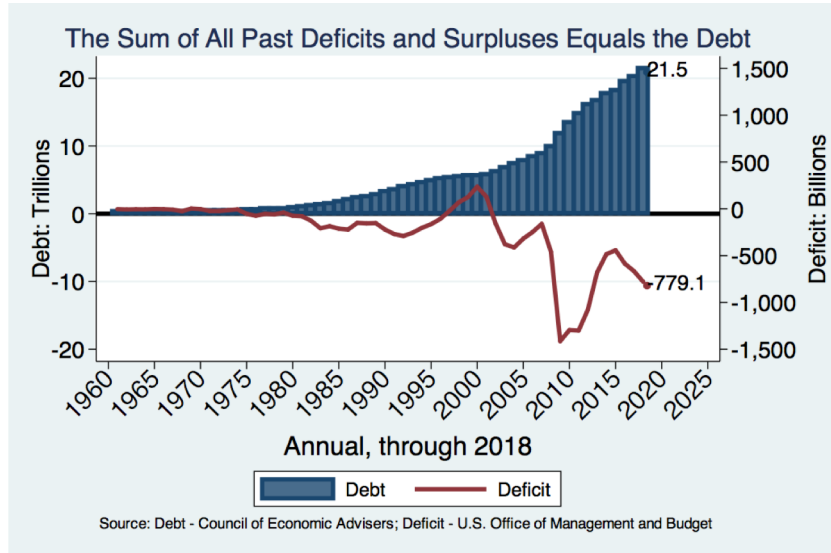
- **Debt:** The accumulation of debt over time.
 - The sum of all past debts and surpluses.

- **FLOW**

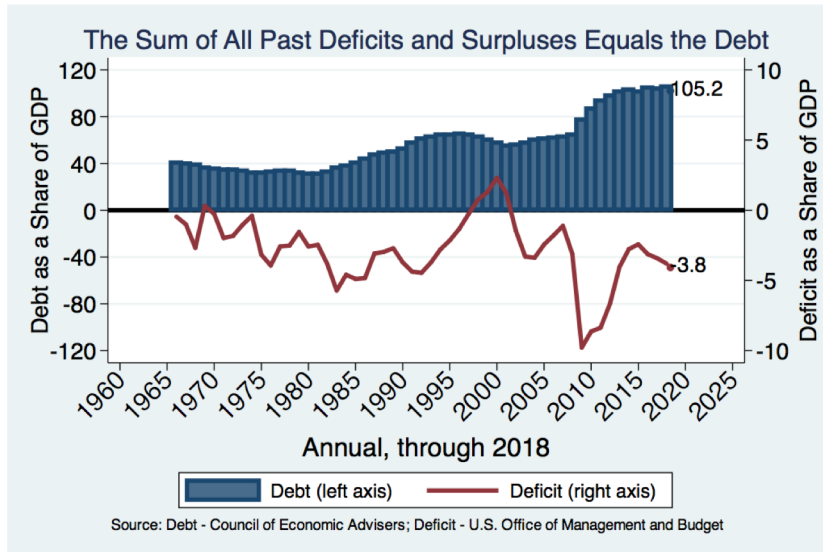
- **Deficit:** The amount of debt accrued in a single year.
- **Surplus:** The excess of revenues over expenses in a single year.



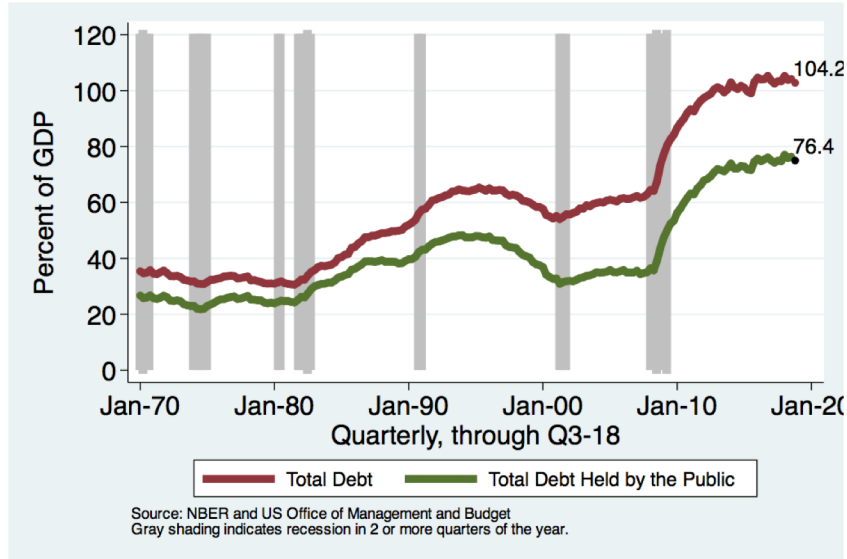
Debt vs. Deficit



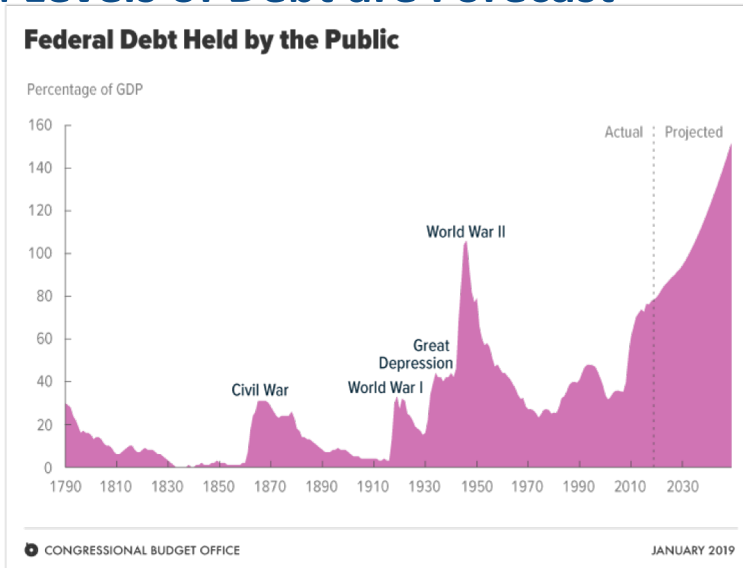
Debt vs. Deficit: Share of GDP



Two Measures of the Debt



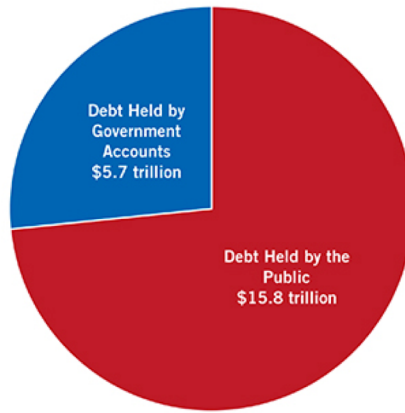
Record Levels of Debt are Forecast





What makes up gross federal debt?

Gross Federal Debt at the End of Fiscal Year 2018:
\$21.5 Trillion

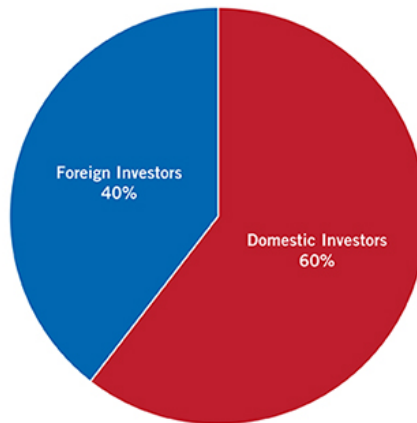


SOURCE: Department of Treasury, *Monthly Treasury Statement*, issue for September 2018. Compiled by PGPF.
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Foreign investors own over one-third of all U.S. public debt

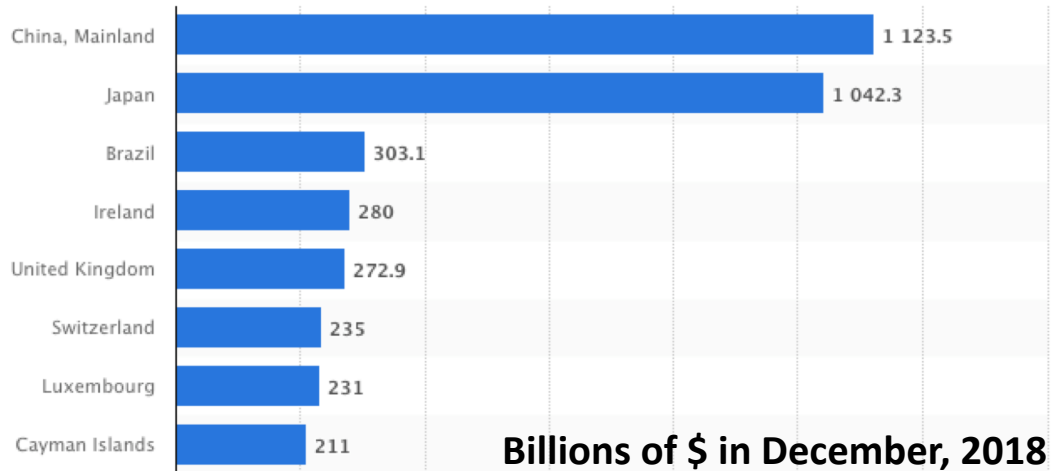


SOURCE: Department of the Treasury, *Monthly Treasury Statement*, issue for September 2018; and Department of Treasury, *Treasury Bulletin*, December 2018. Compiled by PGPF.
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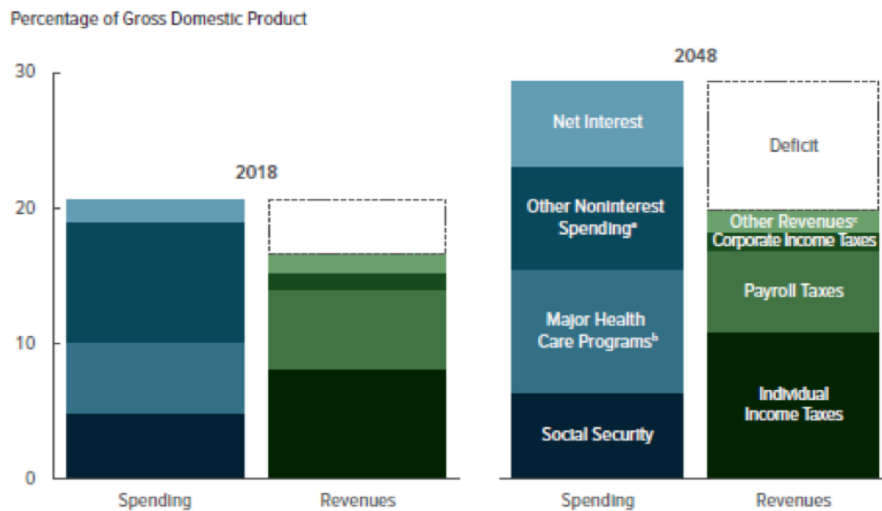
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Who Holds Debt to Foreigners

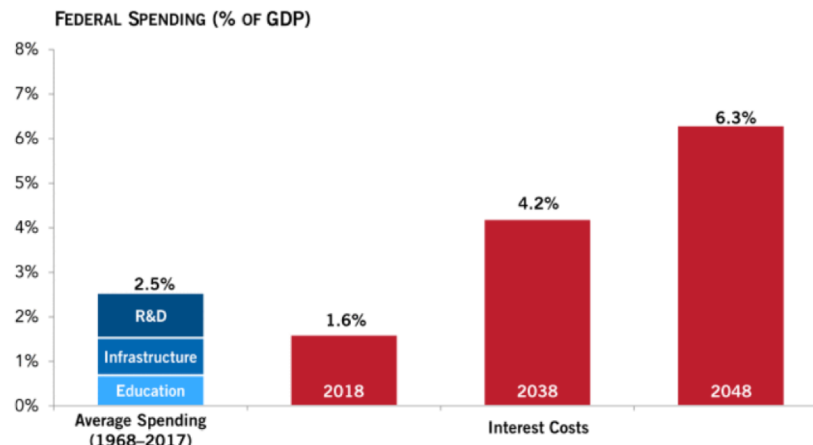


Deficit to Grow Much Faster than Revenues



Source: Congressional Budget Office.

Interest Payments to Grow Significantly



SOURCE: Office of Management and Budget, *Budget of the United States Government, Fiscal Year 2019*, February 2018; Congressional Budget Office, *The 2018 Long-Term Budget Outlook*, June 2018. Compiled by PGPF.

NOTE: Infrastructure excludes defense.

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Perspectives on Increased Debt

- **Government borrowing crowds out private capital and investments.**
 - Weakened by ability to borrow from abroad
- **It is reasonable to borrow at low interest rates for investments.**
 - For example, infrastructure
- **Debt imposes a burden on future generations.**
 - Does it inevitably have to be paid off?
- **In time, it will start to crowd out other government spending.**
 - Diminishing policy priorities in the budget.



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The Reason for Borrowing Matters

- **Two good reasons to borrow heavily:**
 - To support the economy during a recession – fiscal expansion.
 - Investments that will increase economic activity in the future.
- **Should not borrow for:**
 - Items consumed today
 - Government salaries
 - Retirement benefits
 - Tax breaks of uncertain benefit to the broader economy.

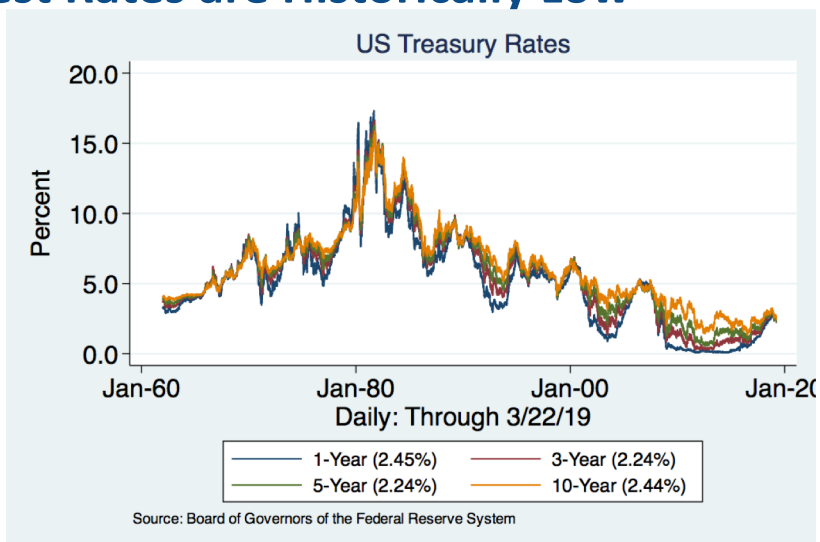


Is the Debt a Problem Today?

- **Currently borrow about \$100 billion each month with little difficulty.**
- **Interest rates are very low, less than 3% on 10-year notes.**
- **Very little evidence of "crowding out".**



Interest Rates are Historically Low



So, Why Worry About it?

• If debt gets too high:

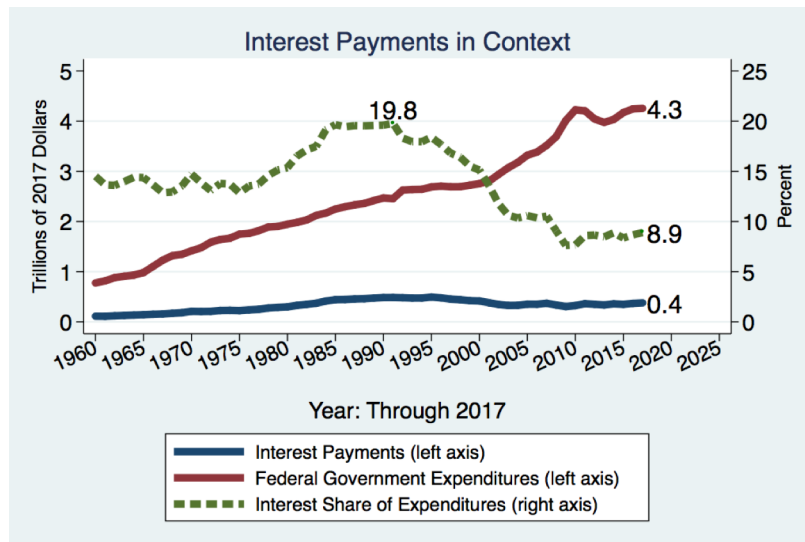
- There is the potential for investors to start questioning the creditworthiness of the U.S. Government.
 - o Problem: Nobody knows how high might be too high?
- It becomes more difficult to borrow in times of crisis.
 - o War, severe recession
 - o “Fiscal space” – impossible to measure how much we have, but clear that we have less now than back in 2007.
- Could start to crowd out investments by consumers and businesses.
 - o Not currently a problem. No idea if/when it might be come one.
- Could be inflationary.

So, Why Worry About it?

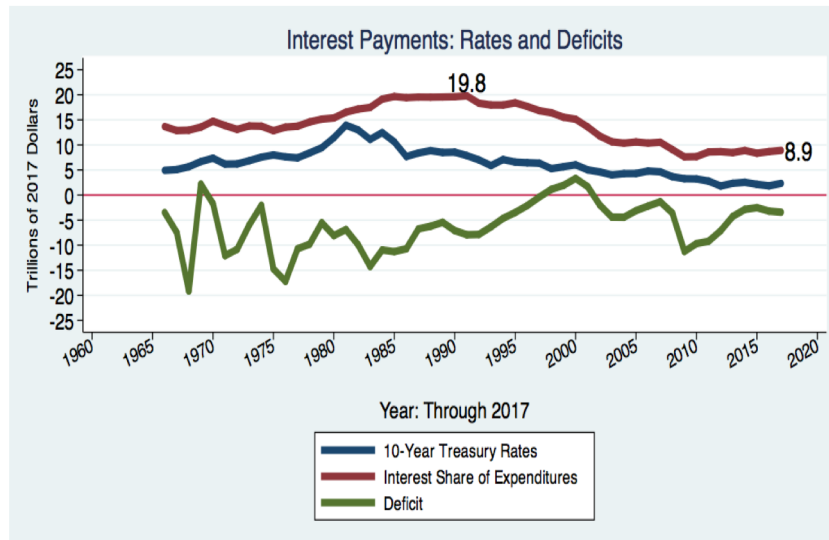
- **If debt continues to grow:**

- Interest payments will grow with it.
 - o 8% of spending in 2018.
 - o 22% of spending in 2048.
 - o Less room for using the budget for policy priorities.
 - o 40% of payments go abroad.
- Interest RATES may increase.
- The longer we wait to address it, the harder and more disruptive it will be to address it.

History: A Cautionary Tale?



Interest Payments and Interest Rates



Are There Reasons to Wait?

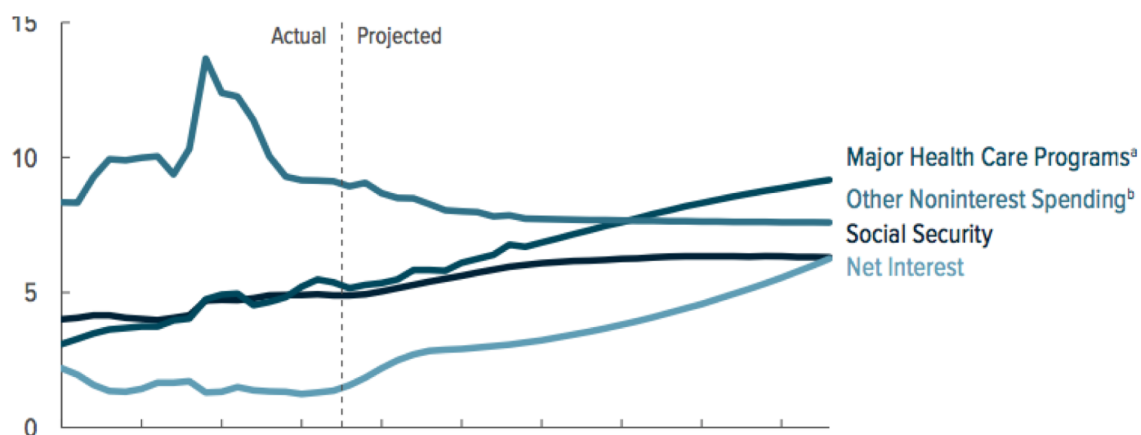
- **Very little evidence of:**
 - Crowding out
 - Inflationary impact
- **Uncertainty about the future**
 - Economic growth may render action today unnecessary.
- **There are a great many investments to be made by the gov't.**
 - Infrastructure
 - Education
 - Much, much more...

Bottom Line

- Question is not **WHETHER** the U.S. will have to act...
...but **WHEN**.
- Some combination of the following **WILL** be necessary:
 - Raising taxes
 - Cutting spending
 - Reigning in health care costs



What Are the Primary Drivers Going Forward?



Proposals Do Exist

- **Simpson-Bowles**
- **Domenici-Rivlin Task Force**
- **Solutions Initiative – Peter G. Peterson Foundation**
 - American Action Forum
 - American Enterprise Institute
 - Bipartisan Policy Center
 - Center for American Progress
 - Economic Policy Institute

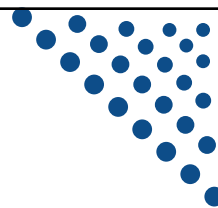


Summary: The Debt

- **The jury is (sort of) out on the debt.**
- **Conventional wisdom is being challenged:**
 - Previously: inflationary and crowd out private investment
 - New assertion: these things don't matter for a country that can borrow in its own currency.
- **Upshot?**
 - This is a policy choice.
 - The cautious approach is to reign in the debt.
 - The cautious approach may lead to slower economic growth.



Thank you!



Any Questions?

www.NEEDelegation.org

Jon Haveman, Ph.D.

Jon@NEEDelegation.org

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