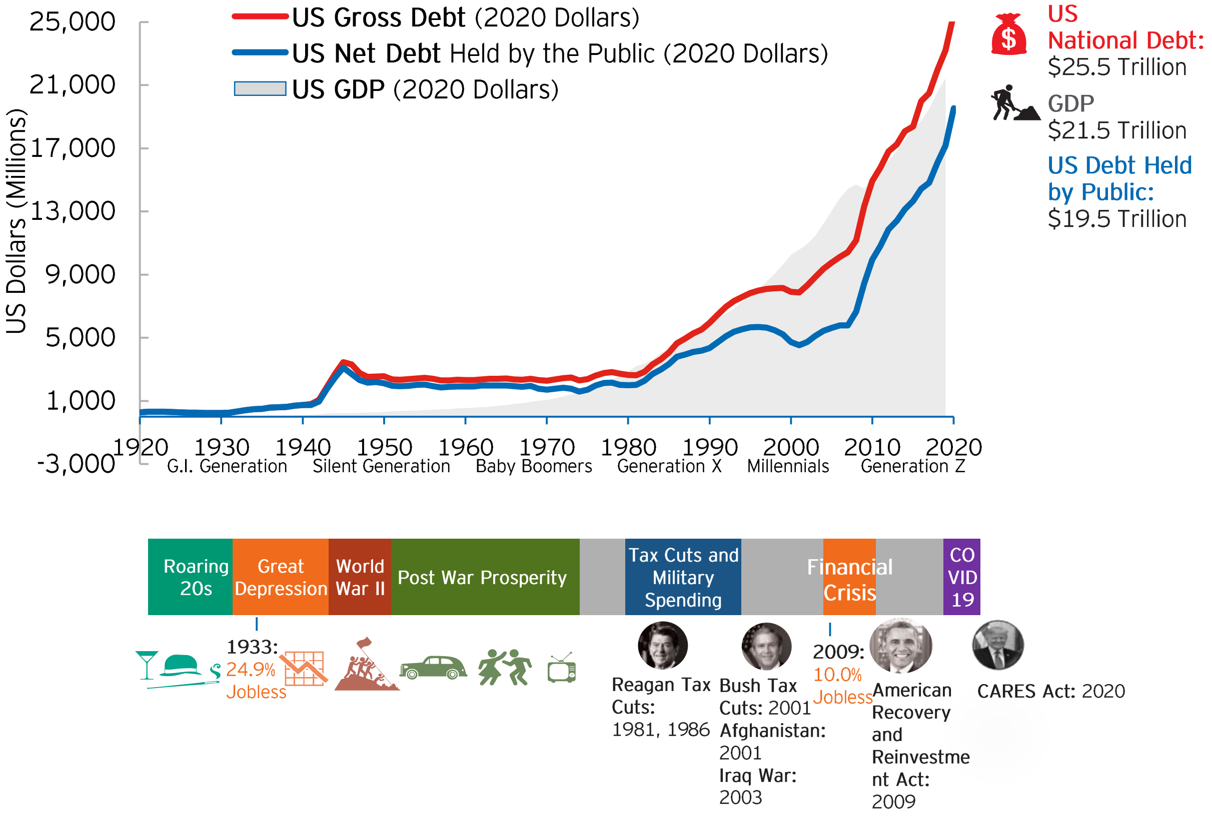
Invesco

The Truth about Debt

2020

The History of US Debt

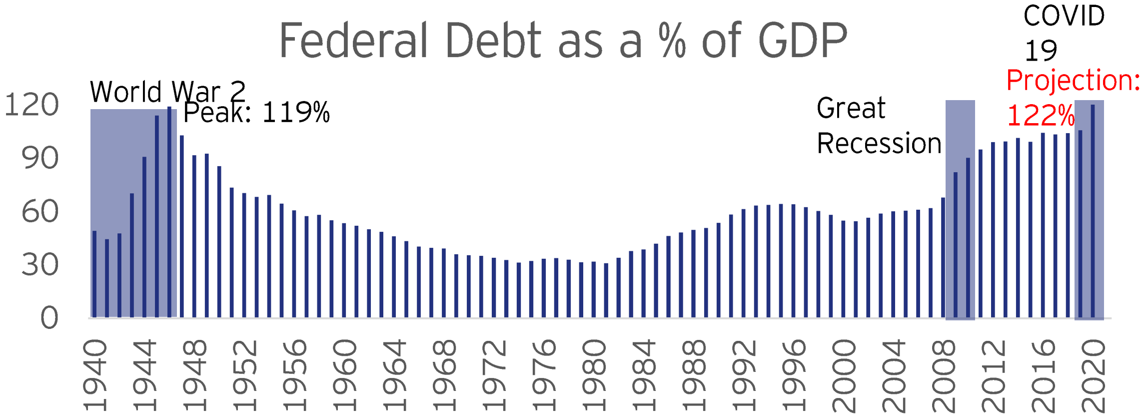
- US debt has steadily risen since the country was founded
- Some may see this as a negative sign to be regretted, but one of the founding fathers and first treasury secretary of the United States, Alexander Hamilton, designed it this way
- A steady market for federal debt has been a blessing for the United States as it enables the country to tap capital markets when needed
- Throughout the 20th century despite rising debt levels, the United States has grown dramatically more prosperous
- This prosperity has underpinned the serviceability and sustainability of US debt and allows the United States unrivaled fiscal flexibility today to meet challenges like stimulus to help citizens and businesses deal with recent Coronavirus crisis

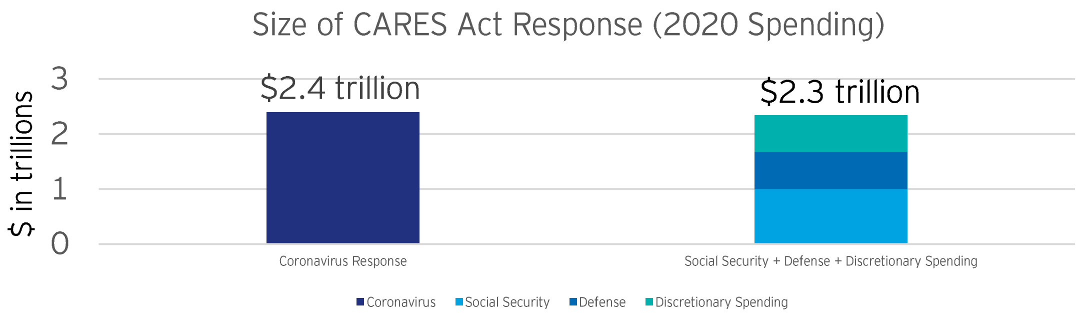


Sources: American Farm Bureau Federation, Congressional Budget Office, The Economist, Federal Deposit Insurance Corporation, Investopedia, PBS, US Bureau of Labor Statistics, US Census Bureau, US Department of Commerce, Bureau of Economic Analysis, US Treasury, and GOOD Worldwide, 3/31/20.

The Coronavirus 2020 Response Has Added Significant New Debt to Outstanding Amount

- The size of the coronavirus response has been large by historical standards for US federal expenditures
- The CARES act alone was approximately $2.4 trillion in new spending
- For perspective, social security, defense spending and discretionary spending combined for fiscal year 2019 will be lower than $2.4 trillion
- This has added to the outstanding debt pile significantly as much of the stimulus spending will be financed by new borrowing
- While high, by historical standards, federal debt as a percent of GDP is near the World War 2-level peak
- The country has grown out of debt levels this high before and will likely again



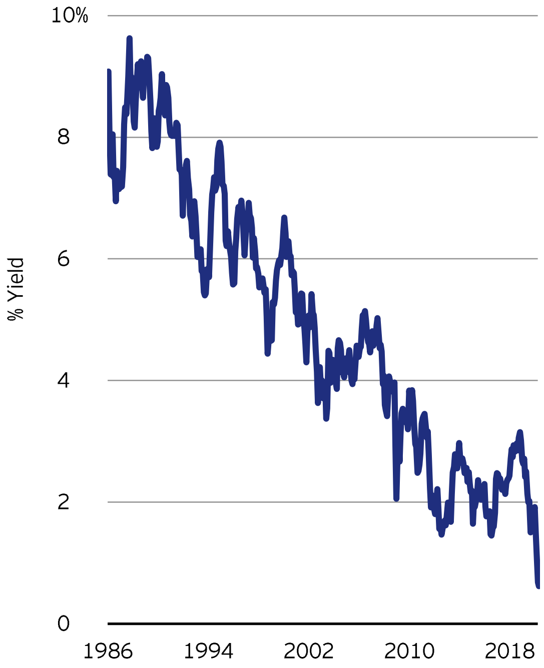


Sources: St. Louis Federal Reserve bank and Whitehouse.gov, 3/31/20.

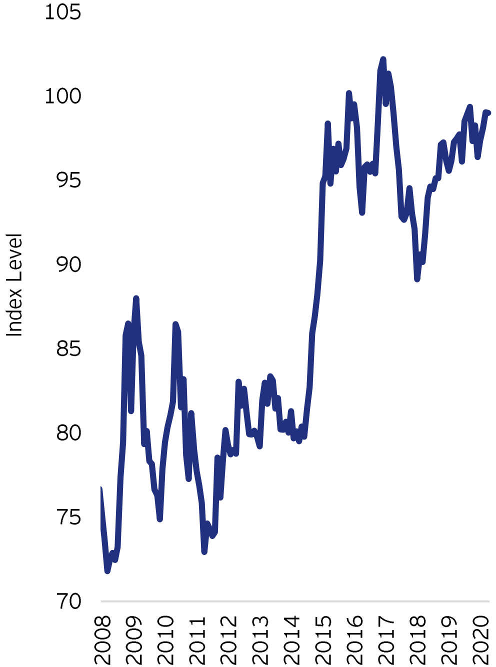
As Investors Have Been Worrying About Debt, Treasury Rates Have Fallen and the US Dollar has Been Largely Strong

- In fact, over the past 30 years as government debt and spending have risen, interest rates have fallen dramatically
- The attractiveness of US debt has remained high as the world's most liquid and deep market at $20 trillion+
- No other country rivals the US for issuing the global safe-haven asset, and as a result, the US dollar has remained quite strong during the past 30 years

US 10-year Yield



DXY Index

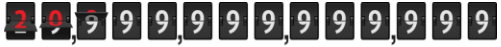


Source: Bloomberg, 4/30/20.

The US is not a bad credit risk

- In fact, the US has far more assets than is commonly realized
- Rather than measuring debt as a percentage of GDP, which is primarily an income measure, measuring debt against total assets paints a far more solvent picture.
- If all the land, buildings and natural resources of the US economy were combined, the country would have more than $200 trillion in assets
- While not all are liquid, they certainly paint the US as a much better credit risk than many would believe

Liabilities: $25 Trillion



Assets: >$200 Trillion

Land, Buildings, and Commodities

640 million acres of land representing **28%** of the country and **47%** of the west coast

$55.7 trillion of oil

$8.6 trillion of natural gas

$22.5 trillion of coal

$3.3 trillion in government buildings and other property

≈ **$6-$10 trillion** in military assets

Financial Assets

$2.0 trillion in stocks, bonds and other financial assets (ex. gold)

$320 billion in bullion gold reserves

Present Value of Future Taxes

2019 Tax Revenue
$3.7 trillion

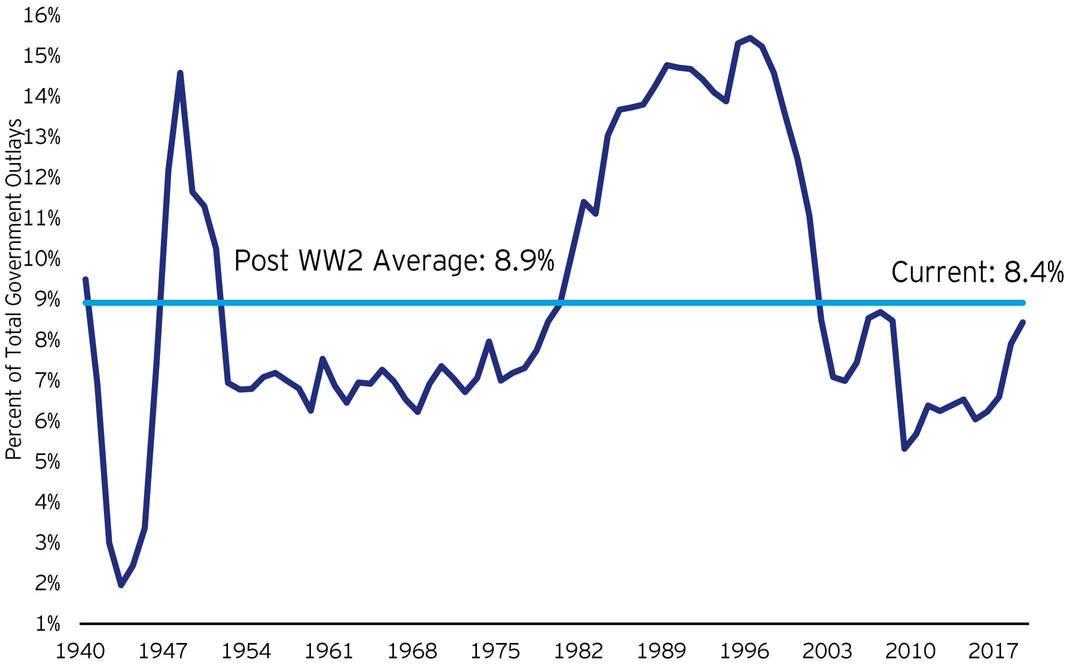
2066 Tax Revenue
$22 trillion
(17% of $131 trillion GDP)

Sources: US Treasury, US General Services Administration, Institute for Energy Research, Federal Reserve, and Bloomberg, as of 3/31/20.

Interest Payments on Federal Debt Are near Historic Lows

- In fact, interest payments on US debt are below post-WWII averages.
- This is partly a function of low interest rates, but also a signal that the current debt service, even on these higher debt levels, are more than sustainable given that they are near 100 year averages
- If interest rates rise, this number could climb, but even in the late 1990s- a period remembered by most as one of relative prosperity- the US spent approximately 15% of its budget on interest payments.
- Even if interest as a percentage of outlays increased, it would take a long way and dramatically higher rates to even reach that late 1990s level of expenditures

Interest payments on US Debt as a % of Total Government Spending

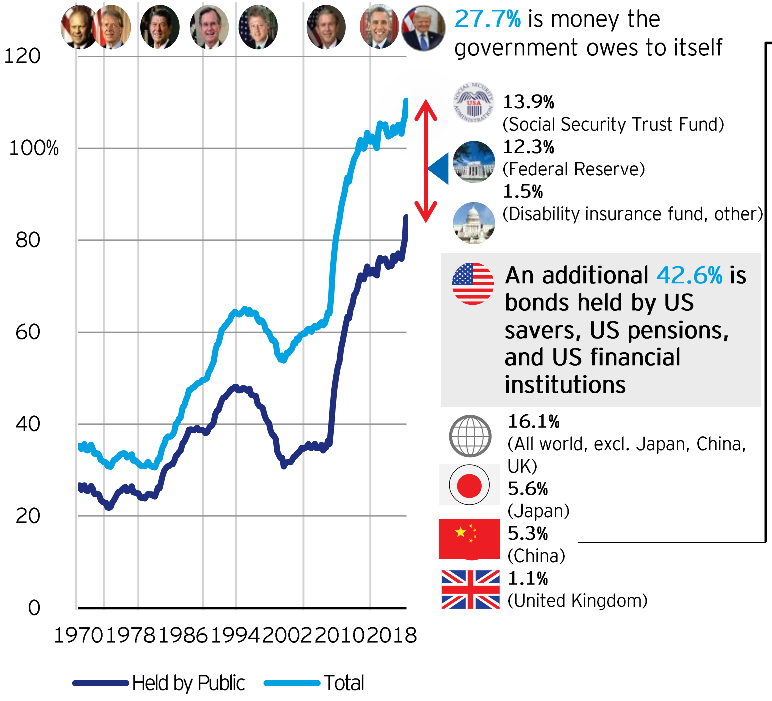


Source: FRED, 12/31/19.

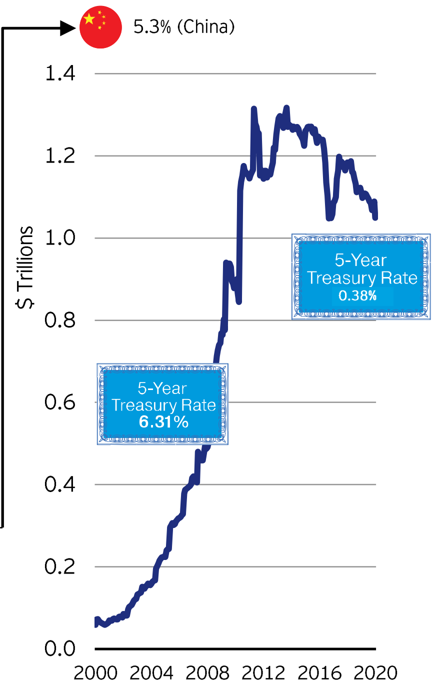
US debt holders are not all outside of the US

- Around one third of the US debt load is actually owed to the federal government itself in the form of IOUs
- Similarly, around 43% of debt held outside of the federal government is owed to US institutions like pension funds
- Only around 30% of outstanding debt is owed to foreign countries, many of whom are close allies like Japan and the United Kingdom
- The system is not poised to collapse even if China reduces its holdings of US treasuries
- China has actually been gradually reducing their holding of US treasuries to fund current spending needs for years. The peak of Chinese US treasury holdings was actually in 2013. Since that time interest rates have fallen from approximately 2.9% to less than 1% today.
- This is hardly the sign of a collapse in appetite for US debt

Debt: Total and Held by Public as a Percent of GDP



US Treasury Securities Foreign Holders: China



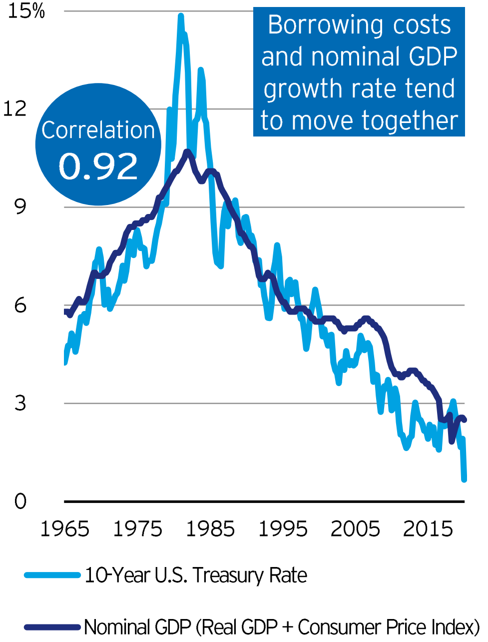
Source: US Treasury, 3/31/20.

Even Higher Interest Rates Won't Change Debt Affordability Drastically

- Even if interest rates were to rise, the US would have more than enough fiscal room to deal with higher payments
- The relationship between interest rates and economic growth, furthermore, is quite close at 0.92 correlation
- Without a dramatic acceleration in growth, it's unlikely that interest rates will rise drastically
- In fact, even with a modest growth path of 1% nominal GDP growth, tax revenues will rise by far more than increased interest expenses

Sources: US Bureau of Economic Analysis and Bloomberg, as of 3/31/20. Nominal GDP is smoothed over 10 years, and as of 3/31/20. Forecasts may not be achieved. GDP (gross domestic product) is the total value of all final goods and services produced in a country in a given year. Correlation expresses the strength of relationship between distribution of returns of two sets of data. The correlation coefficient is always between +1 (perfect positive correlation) and -1 (perfect negative correlation). A perfect correlation occurs when the two series being compared behave in exactly the same manner. **Past performance does not guarantee future results.**

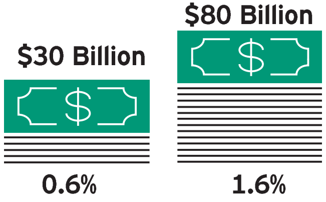
10-Year Treasury Rate and Nominal Gross Domestic Product (GDP) Y/Y Percent Change (10-Year Moving Average)



Example

Treasury issues $5 trillion in new debt over next 10 years.

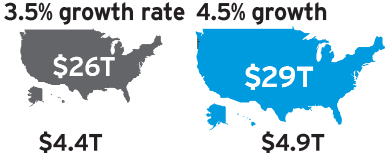
A one-time sustained increase in the 10-Year Treasury rate from 0.6% to 1.6%.



Increased Interest Expense: $50 Billion

Nominal GDP growth rate also increases by 1%

US GDP in 2026 at



Tax Revenue = (17% of GDP)

Increased Interest Expense: $500 Billion

How Will We Pay Back the National Debt? We Won't

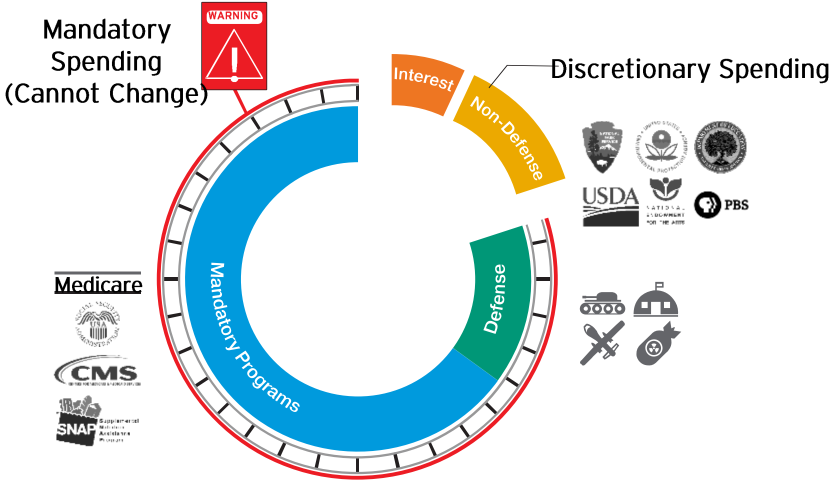
- The Majority of Government Spending Goes to Mandatory Programs, Defense and Interest- all important things almost every American has an interest in continuing to fund.
- Rather than focus on paying back the debt, sustainability is key.
- Like Alexander Hamilton envisioned, the national debt is something to be cherished and tended to rather than eliminated through huge spending cuts and revenue increases.
- Most of the government's work is essential, only about 12% of expenses in each year are "discretionary" or the much-hated pork barrel projects.
- Reducing expenditures modestly and focusing on boosting economic growth is the likeliest path for sustainability of the federal debt going forward.

Expenditures

90%

of 2020 US expenditures went to:

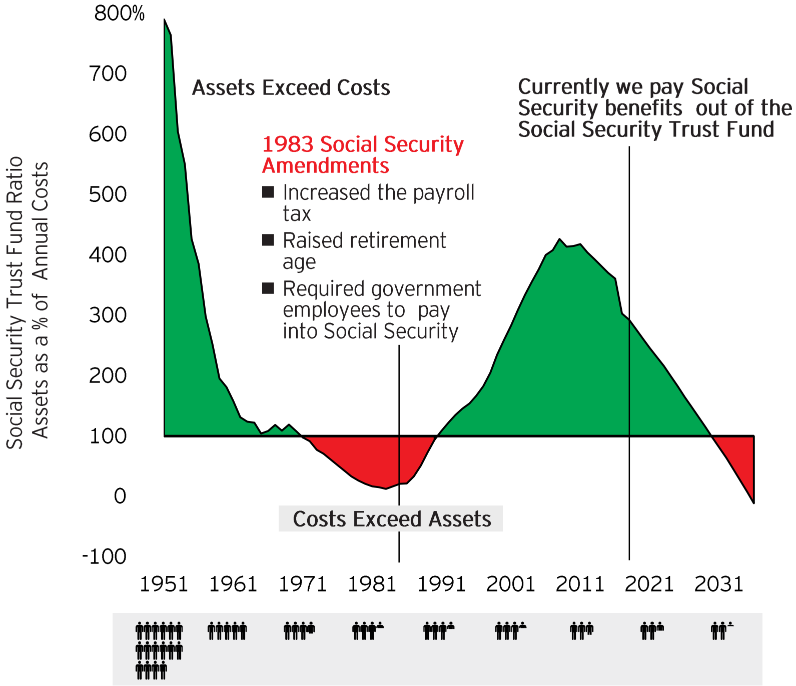
1. **Mandatory Programs**
2. **Defense**
3. **Interest**



Source: US Treasury, 3/31/20.

Depleting the Social Security Trust Fund Won't Make the Program Collapse

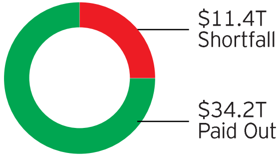
- Social security, for instance, will need to be addressed in the future
- It is on solid footing today, however, and will likely be dealt with in a similar way to the reform of the programs during the Reagan administration in 1983.
- Then, law makers increased the payroll tax and raised the retirement age while also requiring government employees to pay into Social Security
- A similar series of changes today could put the trust fund on stable footing for another 50 years



What happens from 2034 to 2090?

1. Payments are no longer made from the depleted trust fund.
2. Payments paid directly from the payroll taxes being collected.

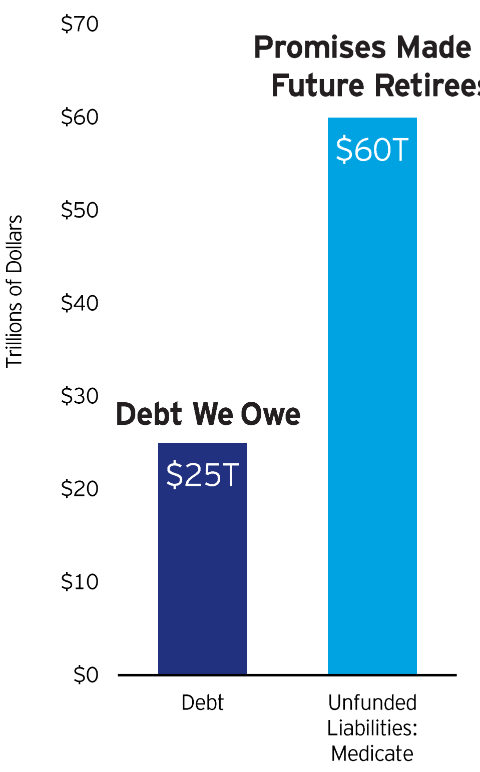
3. Unless changes are made, the federal government will collect only 75% of scheduled retirement benefits.



Source: Congressional Budget Office Social Security Policy Options, July 2020.

Even Medicare Could Be on Sounder Financial Footing with Modest Fixes

- The $60 trillion of unfunded Medicare liabilities is not catastrophic for the country
- Rather, small fixes to the program along with slowing the rate of healthcare cost growth could help dramatically reduce the burden of the program
- Focusing on economic growth, or growing the pie, will be another important feature of placing this important program on sounder financial footing
- In short, high expenditures on healthcare do not equal doom, but rather require creative bipartisan thinking



Addressing the Medicare Shortfall

Adjustments to the program

Raise the retirement age

Raise Medicare premiums

Raise the payroll tax

Slow health care costs growth rate

Pay for service, not tests

Personalized medicine

Higher deductibles

Grow the economy

2020
Nominal GDP

2066
Assumes 4% nominal GDP (2% real GDP, 2% inflation)

Sources: 2019 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds, 12/31/19.

Definitions

GDP (gross domestic product) is the total value of all final goods and services produced in a country in a given year.

Disclosures

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