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Saving Social Security

by

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ABSTRACT: For more than 25 years, the Social Security Trust Fund has been projected to run out of money in 2033 (give or take a few years), potentially causing benefits to be severely reduced in the absence of corrective legislative action. Today (February 2024), projections are made by the Social Security Administration that indicate that future benefits will need to be reduced by roughly 25 percent or taxes will need to be increased by about 33 percent, or some combination to avoid benefit curtailment. While Congress will most probably prevent benefits from being reduced for retirees and those nearing retirement, the longer Congress and the president take to address the shortfall, the more politically unpalatable (and possibly draconian) the solutions will be for all others.

Dozens of proposals are being evaluated to address the long-term problem by mainstream benefits experts, economists, think tanks, politicians, and government agencies but, with rare exceptions from a few economists, none address the short-term problem of Trust Fund depletion, provide a workable roadmap for the long-term challenges, or consider fundamental financing differences between the federal government and the private sector.

This paper aims to address these issues by suggesting legislative changes that will protect the Social Security system indefinitely, help ensure the adequacy of benefits for retirees and their survivors and dependents, and remove confusing and misleading legislative and administrative complexity. In making recommendations, this paper will demonstrate that the Social Security Trust Funds, while legally distinct, are essentially an artificial accounting contrivance within the US Treasury that have become a tool to force program changes that, for ideological reasons, will likely shift an increasing financial burden onto those who can least bear it. Finally, while the focus of this paper is on the Social Security system, it would be incomplete without also addressing, albeit in a limited way, the larger political issue of the nation's debt and deficit along with the implications for inflation.

KEYWORDS: Social Security, FICA, Taxation, Taxes, Trust Fund, Trust Funds, OASI, OASDI, Medicare, Deficit, Inflation, Welfare, Treasury, Debt, Old-age

JEL CODES: H00, H50, H51, H53, H55, H61, H62, H63, H64, H21, H22, H23, H24, H31, E62

A BRIEF HISTORY OF SOCIAL SECURITY

At least as far back as the Middle Ages, society has accepted a measure of responsibility to provide for indigents in old age.¹ The thinking that led to the introduction of the Social Security program in the United States comes from this societal obligation. It can be traced at least as far back as the English Poor Law of 1601 (Hansan 2011), the first codification of a state's responsibility to provide for the welfare of its citizens, funded by general taxation. As colonists arrived in the New World, they introduced their version of "poor laws" fashioned after the English version, also financed by general taxation.

In August 1776, the first pension act, financed by general tax revenues (Waite 1893) provided payments to soldiers and sailors who had been injured in service and were incapable of earning a living. It might be said that this led, in 1797, to Thomas Paine's "Agrarian Justice" pamphlet promoting an estate tax on those who owned land to finance universal old-age and disability pensions and a stipend for those reaching the age of maturity.

While Paine's ideas were not adopted at the time, the Civil War Pension program, first adopted in July 1862 and later expanded several times, provided disability, survivors, and old-age benefits for Civil War veterans and their families (Costa 1998). Again, there was no direct link between the benefits to be paid and the source of the revenue (taxes) to provide them.

In 1878, New York City established a retirement plan for police officers. In 1889, Germany became the first nation in the world to adopt a national old-age retirement program. In 1884, the first statutory retirement program for teachers was adopted in New York City, and in 1898, Ohio created the first state law in the nation to provide pensions for the blind, followed by Illinois in 1903 (Iekel 2018). All of these programs were financed, in part or in whole, through general taxation.

¹ <https://www.ssa.gov/history/briefhistory3.html>.

In 1909, the first federal old-age pension bill was introduced in Congress but was defeated by, among others, businesses who argued it would be a disincentive to work. In 1911, Massachusetts established the first contributory pension system for all state employees. Arizona enacted the first state law providing old-age pensions in 1914 but it was declared unconstitutional in 1916.

In 1915, the Territory of Alaska introduced the first old-age pension system not challenged on constitutional grounds.² This program was financed by a combination of state and federal contributions.

The Civil Service Retirement Act was enacted in 1920, covering all civil service employees after they reached retirement ages specified by their employment classification. By 1930, all federal workers and an increasing number of state and local government employees had pension benefits. As with the above programs, these pensions are financed, at least in part, by general tax revenues. According to the Social Security Administration's (SSA) website:

“Beginning in the mid-1880s, four demographic shifts led to traditional systems of economic security becoming unworkable:

- The Industrial Revolution.
- The urbanization of America.
- Disappearance of the “extended” family.
- A marked increase in life expectancy.”³

Poverty grew dramatically after the outbreak of the Great Depression with an estimate that over half of the elderly in 1934 did not have sufficient income to be self-supporting. In September 1933, Francis Townsend, a California physician who found himself unemployed with no savings at age 66, published the “Old-Age Revolving Pensions (OARP)” plan (also known as “The Townsend Plan”) in a local paper to provide a government pension of \$200 to every citizen of

² <https://www.ssa.gov/history/1900.html>.

³ <https://www.ssa.gov/history/briefhistory3.html>

age 60 and over funded by a 2 percent national sales tax. By 1935, the movement claimed nearly 8 million members (some estimates were higher), increasing pressure on the federal government to do something.⁴

As this history shows, going back to colonial times, there was growing concern about the plight of old-age citizens and the role the government could play in addressing the problem. With precedent for old-age insurance growing and the crushing poverty of the Great Depression, President Roosevelt introduced his proposal for social insurance as a replacement for welfare when he was elected president in 1932.⁵

Social insurance, which was popular in Europe, differed from welfare by creating a work-related system paid for by employee contributions (which, of course, was a tax by another name). While earlier federally sponsored retirement programs were financed by general revenues, the employee-paid work-related system appealed to President Roosevelt and, in 1934, Roosevelt signaled his intention to create the Social Security program by appointing the Committee on Economic Security (CES) to study economic insecurity and to propose legislation.

The Social Security Act (the Act) was signed into law on August 14, 1935. Payroll taxes were initially set at 1 percent of earnings capped at \$3,000 for both employees and employers beginning in 1937 with benefits to begin in 1942 (later changed to 1940).⁶

FDR—in defending the regressive nature of the payroll taxes—stated, “We put those payroll contributions there to give the contributors a legal, moral, and political right to collect their pensions [...] With those taxes in there, no damn politician can ever scrap my Social Security program.” FDR went on to say, “If I have anything to say about it, it will always be contributed, both on the part of the employer and the employee, *on a sound actuarial basis* (emphasis added).

⁴ <https://www.ssa.gov/history/townsendproblems.html>.

⁵ <https://www.ssa.gov/history/briefhistory3.html#:~:text=Social%20insurance%2C%20as%20conceived%20by,through%20taxes%20paid%20while%20employed>.

⁶ <https://www.ssa.gov/history/briefhistory3.html#:~:text=The%20Social%20Security%20Act%20was,a%20continuing%20income%20after%20retirement>.

It means no money out of the Treasury." While actuarial projections at the time showed that the program would be self-sufficient in perpetuity, the program failed to be run "on a sound actuarial basis," as will be discussed below (Robinson 2023).^{7 8}

Initially, the Social Security Act rules provided that funds were appropriated from general revenues in the amount equal to the payroll taxes into "reserve" accounts at the Treasury, and benefit payments were appropriated from those accounts.⁹ Under the Act at the time, the amounts credited to the reserves were converted to marketable and non-marketable government bonds and interest was set by the Act at 3 percent.¹⁰

However, concerns that the government was using the reserve account to pay other bills arose almost immediately, and so, in 1940, the old-age and survivors insurance (OASI) Trust Fund was established within the Treasury by changing the language in the Act from referring to the "Old-Age Reserve Account" to the "Federal Old-Age and Survivors Insurance Trust Fund."¹¹ As described below, the creation of the Trust Fund was form over substance (Robinson 2023). The creation of the Trust Fund did not change the fact that the excess of OASI income over costs would be used for the general expenses of the Treasury.

⁷ <https://www.ssa.gov/history/genrev.html>

⁸ Moreover, as will be discussed below, all benefit payments come from the Treasury's General Fund (that is, out of the Treasury).

⁹ Under the Constitution, all federal spending is "appropriated" (authorized) by Congress. Note that it is legislative language, not a technical requirement, that equates the amount appropriated to the Trust Funds to payroll taxes. Technically, any amount can be appropriated supported by legislation.

¹⁰ As will be discussed later, conversion to these bonds had no practical impact on the nation's finances.

¹¹ The disability income (DI) Trust Fund was established in 1956 when disability benefits were added to Social Security.

Starting in 1960, special issue non-marketable, redeemable at par, government bonds became the investment vehicle for the Trust Fund and the statutory interest crediting rate on those bonds was changed from 3 percent to a formula based on the prevailing average rate on marketable bonds.¹² For Social Security, the combined employee and employer payroll tax rates increased from the initial 2 percent applicable 1937–49 to today’s 12.4 percent (effective in 1990), along with an increase in the taxable wage base from \$3,000 initially to \$168,600 for 2024.

In the late 1970s, Social Security’s finances began to deteriorate with an expectation that the Trust Fund would be depleted by the early 1980s.¹³ This led to President Reagan creating a bipartisan commission in 1981 to make recommendations addressing the short-term financing crisis. Also late in 1981, Congress passed an amendment to the Social Security Act which provided one-year limited authority for inter-fund borrowing among the OASI, DI, and HI Trust Funds to meet immediate shortfalls.

In 1983, the Greenspan Commission led to the most significant changes in Social Security since its inception, including:

- acceleration of scheduled tax rate increases,
- a delay in cost-of-living adjustments by six months, and
- the introduction of Social Security benefit taxation (on middle- and high-income recipients).

While the Commission did not attempt to solve the long-term funding gap (Pattison 2015), it did bring in an additional \$110 billion. To close the short-term funding gap as well as to provide for long-term solvency, Congress enabled the Trust Fund to be credited at the beginning of the month for funds expected to be received later in the month, extended the 1981 inter-fund borrowing authority through 1987 (Schobel 1983), and added the provision of delayed normal retirement from age 65 to age 67. These changes, together with those of the Commission, were

¹²[https://www.ssa.gov/history/BudgetTreatment.html#:~:text=Since%201960%2C%20the%20policy%20has,have%20been%20added%20to%20the; https://www.ssa.gov/oact/progdata/fundFAQ.html](https://www.ssa.gov/history/BudgetTreatment.html#:~:text=Since%201960%2C%20the%20policy%20has,have%20been%20added%20to%20the;https://www.ssa.gov/oact/progdata/fundFAQ.html); Note that the interest is established by statute and, therefore, can be changed to anything by a change in the statute.

¹³ <https://www.ssa.gov/oact/STATS/table4a3.html>. From 1975 through 1981, the OAS Trust Fund was being depleted by an average of \$3 billion/year, roughly 10 percent of the Trust Fund balance.

expected to extend the solvency of the OASI and DI Trust Funds for at least the next 75 years (Penner, n.d.). Transfers from the Treasury General Account were also authorized to pay for certain specified benefits and reimbursed taxes.¹⁴

Due to economic experience not anticipated in 1983,¹⁵ the 2023 Social Security Trustees report projects the OASI Trust Fund will be insolvent in 2034, after which point appropriated funds based on payroll taxes are estimated to be sufficient to cover only 77 percent of benefit payments due, decreasing to 71 percent by 2097. In a report from 2015, the trust fund depletion in 2033 would be so rapid that it could not be remedied with the approaches used in 1981 and 1983, a point reinforced in a Congressional Research Service report in 2022, indicating that the DI and HI Trust Funds will be insufficient to cover the shortfall (Pattison 2015; Huston 2022a).

MORE ABOUT THOSE TRUST FUNDS

To understand how Social Security is financed and how that can affect future changes to Social Security, it is necessary to understand the real nature of the Trust Funds, the non-marketable bonds, and the flow of tax revenue.

The federal government maintains its finances in the Treasury General Account (the TGA) held at the nation's bank—the Federal Reserve.¹⁶ The Treasury General Fund (TGF) serves as the checking account for the Treasury, receiving tax and other collections and disbursing funds for expenses.¹⁷ Several subaccounts are maintained within the TGA: the General Fund, the OASI and DI Trust Funds, and Trust Funds for Medicare Part A, federal employee pensions, and

¹⁴ <https://www.ssa.gov/history/1983amend.html>.

¹⁵ “Presentations of the Office of the Chief Actuary,” n.d. <https://www.ssa.gov/oact/presentations/>. See: “Social Security and Medicare: State of the Systems,” October 15, 2023, Presentation to the Conference of Actuaries

¹⁶ The TGA includes the Treasury Tax & Loan (TT&L) accounts that are maintained at thousands of financial institutions and are used to facilitate the processing of employee withholding and other types of taxes. U.S. Department of The Treasury. “TREASURY ANNOUNCES NEW CASH MANAGEMENT TOOL,” December 14, 2023. <https://home.treasury.gov/news/press-releases/js946>.

¹⁷ <https://home.treasury.gov/subfooter/faqs/accounting-budget-faqs#:~:text=The%20tax%20money%20the%20Federal,pay%20for%20essential%20government%20services.>

others.¹⁸ The Trust Funds are legally distinct and are not permitted to have inter-fund transfers unless authorized by law.

When payroll taxes are paid, reserves¹⁹ (Roche, 2010) in that amount shift from the accounts of commercial banks at the Fed to the Treasury's General Fund (Pattison 2015).²⁰ ²¹ At the same time, as required by the Social Security Act, an equal amount is appropriated from the General Fund to the OASI and DI Trust Funds.²²

Also, as required by the Social Security Act, the appropriated funds in the Trust Funds are used to purchase non-marketable government bonds from the Treasury.²³ This results in an internal accounting shift of the appropriated funds from the Trust Funds back to the General Fund. As the bonds are both an asset and a liability of the Treasury, their purchase has no net effect on the financial condition of the Treasury (Wray and Bell 2022). Since the transactions all occur between accounts within the Treasury, there is no change in the value of the TGA beyond the introduction of payroll taxes. However, the value of non-marketable bonds is counted against the federal debt limit (Cagetti et al.) and represents an additional debt of the federal government just as if the debt were issued to the public²⁴.

¹⁸ "Financial Report of the United States Government - Financial Statements of the United States Government for the Fiscal Years Ended September 30, 2022, and 2021," n.d. <https://fiscal.treasury.gov/reports-statements/financial-report/balance-sheets.html>. <https://www.fiscal.treasury.gov/files/reports-statements/financial-report/2022/notes-to-the-financial-statements22.pdf>

¹⁹ Reserves are not part of the technical definition of the money supply. They are created and destroyed by the Federal Reserve as part of monetary and fiscal operations.

²⁰ In practice, "Each day's *estimated* (emphasis added) tax and interest income is immediately converted into a purchase of that amount of Treasury securities. In a separate operation, securities from the funds' investment holdings are redeemed in amounts sufficient to pay that day's estimated benefits."

²¹ Tax dollars are debited from the bank accounts of payees and are removed from the money supply. The Fed's balance sheet is unaffected in total as reserves are transferred from the accounts of commercial banks to the TGA. A description of how money flows within the nation's financial system is beyond the scope of this paper.

²² "Social Security Act §201," n.d. https://www.ssa.gov/OP_Home/ssact/title02/0201.htm.

²³ Ibid.

²⁴ Non-marketable debt can be thought of as a deferral of debt that will eventually become public debt as the OASI Trust Fund (and other similar trust funds) lack sufficient resources to meet expense obligations.

A similar series of internal transactions occurs when interest is paid on the government bonds (recall that the interest credits are statutorily determined by a formula under the Act). When interest is paid on the bonds, it comes from the General Fund into the Trust Funds where it is used to purchase additional non-marketable bonds, sending the interest credits back to the General Fund. This process results in the creation of additional debt in the form of non-marketable bonds while the interest paid, “has no net effect on interest outlays because both the payments and the receipts are recorded in the same category of spending in the federal budget.”²⁵

As with other bonds in the Trust Fund, the non-marketable bonds purchased by the interest credits are both an asset (in the Trust Fund) and a liability of the Treasury (like any other government bond), thus having no net impact on the Treasury’s net worth (but adding to the total federal debt outstanding just as if the bonds were sold to primary dealers).²⁶

When all is said and done, the Trust Funds are simply internal accounting with the unfortunate appearance of substance. If the Trust Fund structure was eliminated tomorrow, there would be no financial or practical impact other than the removal of the trigger mechanism for a forced program change.²⁷ The non-marketable (special issue) bonds could still be issued as they are today, essentially out of thin air. However, if and when the General Fund becomes inadequate to pay government expenses, the non-marketable bonds would need to be redeemed with proceeds from new debt issued to the public.^{28 29}

²⁵ <https://www.cbo.gov/publication/56910>; Remember this point later in the discussion of recommendations.

²⁶ Ibid.

²⁷ But there would certainly be a political impact.

²⁸ Note that interest payments on non-marketable bonds have no financial impact on the economy and, to that extent, do not contribute to private sector wealth or inflation, unlike interest on the publicly-held debt.

²⁹ The main focus of this paper is on the OASI Trust Fund. However, it is worth noting that the federal government manages over 400 trust funds of various types, with more than 100 being similar “non-revolving” trust funds. Out of these, twenty trust funds account for nearly all trust fund revenue. The funds allocated to each trust fund are invested in special-purpose, nonmarketable government bonds. The taxes and fees earmarked for these funds are available for general expenses of the government reducing pressure on the federal deficit and deferring the need to borrow from the public under current law.

THE FLOW OF FUNDS

As soon as estimated incoming payroll taxes and taxes on OASI benefits are appropriated to the Trust Funds, they are used to purchase non-marketable (special issue) bonds with the proceeds returned to the TGF. When it comes time to pay Social Security benefits, one of three scenarios takes place:

1. If the appropriated estimated incoming payroll taxes, taxes on OASI benefits, and interest credits on Trust Fund bonds exceed required benefit payments, the benefit payments are paid from the Treasury's General Fund with proceeds from redeemed non-marketable bonds in the Trust Fund.³⁰ Note that the excess remains in the Trust Fund as non-marketable bonds and, thus, the total federal debt increases by that amount.
2. If required benefit payments exceed the incoming appropriated amounts (as they do currently for the OASI Trust Fund but not for the DI Trust Fund) and sufficient value remains in the OASI Trust Fund to pay the benefits in full (as it does currently), the scheduled benefit payments are paid from the TGF with proceeds from redeemed non-marketable bonds in the Trust Fund. The value of the Trust Fund declines by the amount of redeemed bonds as does the total federal debt.
3. If the Trust Fund is depleted, under current law, benefits will continue to be paid from the TGF but in a reduced amount (Huston 2022b).³¹ Payments are made from the General Fund with the incoming estimated payroll and OASI taxes until a change is made in the

³⁰ The redemption process has no net effect on the financial condition of the Treasury.

³¹ As stated earlier, this is extremely unlikely to happen for political reasons. That said, given the extent of polarization in Congress today, a temporary benefit reduction cannot be totally ruled out. If that happens, the law requires that missed payments be paid eventually.

Social Security Act to restore a positive balance in the Trust Fund. The Antideficiency Act prohibits spending over available earmarked funds unless authorized by law.³²

This was the picture in 2022:

Table 1 OASDI Trust Fund Operations, 2022 (\$ billions)

Source	OASI	DI
Payroll taxes	\$945.9	\$160.7
Taxes on OASDI benefits	47.1	1.6
Interest earnings	63.5	2.8
Government contributions	—	—
Beneficiary premiums	—	—
Payments from States	—	—
Other	^a .2	^b
Total	1,056.7	165.1

	OASI	DI
Reserves (end of 2021)	\$2,752.6	\$99.4
+ Income during 2022	1,056.7	165.1
- Cost during 2022	1,097.5	146.5
Net change in Reserves	-40.7	18.6
Reserves (end of 2022)	2,711.9	118.0

Source: 2022 OASDI Trustees Report

³² <https://www.gao.gov/legal/appropriations-law/resources>

In summary,

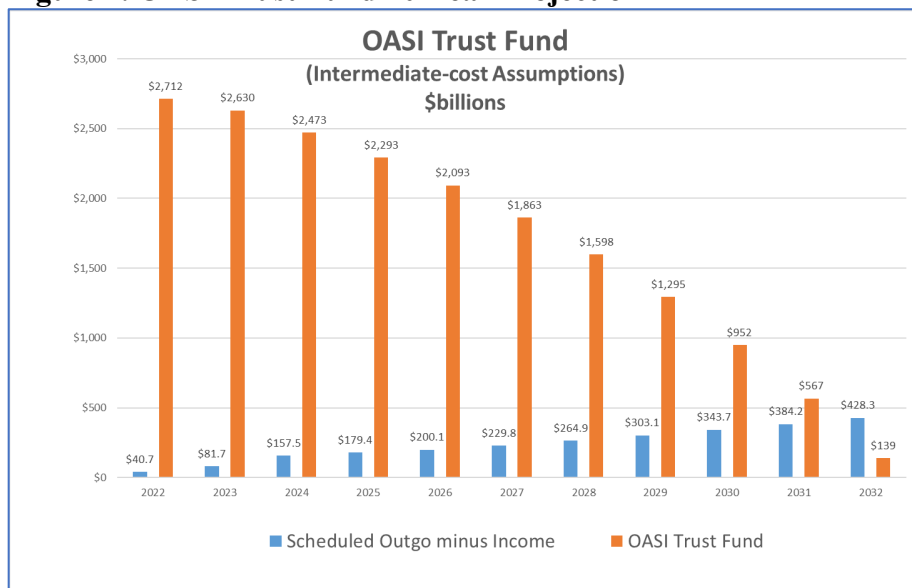
- The Trust Funds are an internal accounting mechanism that was set up to satisfy public concerns about the use of “surplus funds.”
- The investments in the Trust Funds (the special issue non-marketable bonds) represent both an asset and a liability of the Treasury in equal amounts and, therefore, have no net financial impact on the nation’s finances (although they do represent an increase in the total federal debt and count for purposes of the national debt limit).
- The primary external source of funding for Social Security is derived from the estimated amount of payroll taxes but is not the taxes themselves.
- If the Trust Funds become depleted (a potential for the OASI Trust Fund in 2033), benefits will be reduced unless Congress acts to increase the appropriation to the Trust Fund sufficient to avoid insolvency. There are no rules in place to define exactly what would happen if the OASI Trust Fund becomes depleted since the Social Security Act and the Antideficiency Act are in conflict.

SOCIAL SECURITY PROJECTIONS

Social Security actuaries make short- (10-year) and long-term (75-year) projections every year using high, low, and intermediate-cost assumptions. In the short-term projection shown below, the OASI Trust fund will be depleted after 2032 but, more importantly, the annual deficits to the Trust Fund grow by 10 times from about \$41 billion in 2022 to over \$428 billion in 2032. It is

important to note that it is this projected growth in the shortfall that will be impossible to remedy without authorizing additional transfers from the General Fund to the OASI Trust Fund.³³

Figure 1. OASI Trust Fund 10-Year Projection

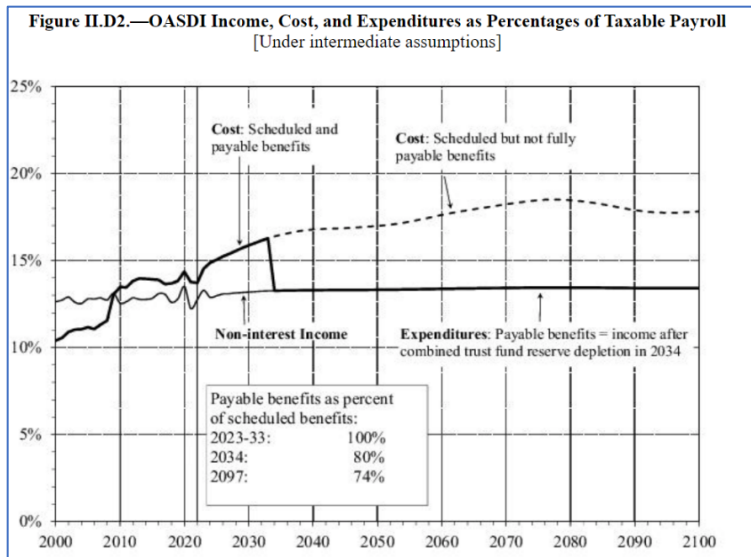


Source: 2023 OASDI Trustees Report

In the figures below, results are shown for the combined Trust Funds (OASI and DI) even though the Funds are independent and cannot share resources without congressional authorization. Here, the *combined* Trust Funds are depleted in 2034 under the intermediate-cost assumptions after which appropriated revenue is inadequate to pay all scheduled benefits (the difference between the solid and dotted lines after 2034 representing additional contributions as a percentage of payroll estimated to be needed to pay the scheduled benefits).

Figure 2. OASDI Income, Cost, and Expenditure Long-Term Projection

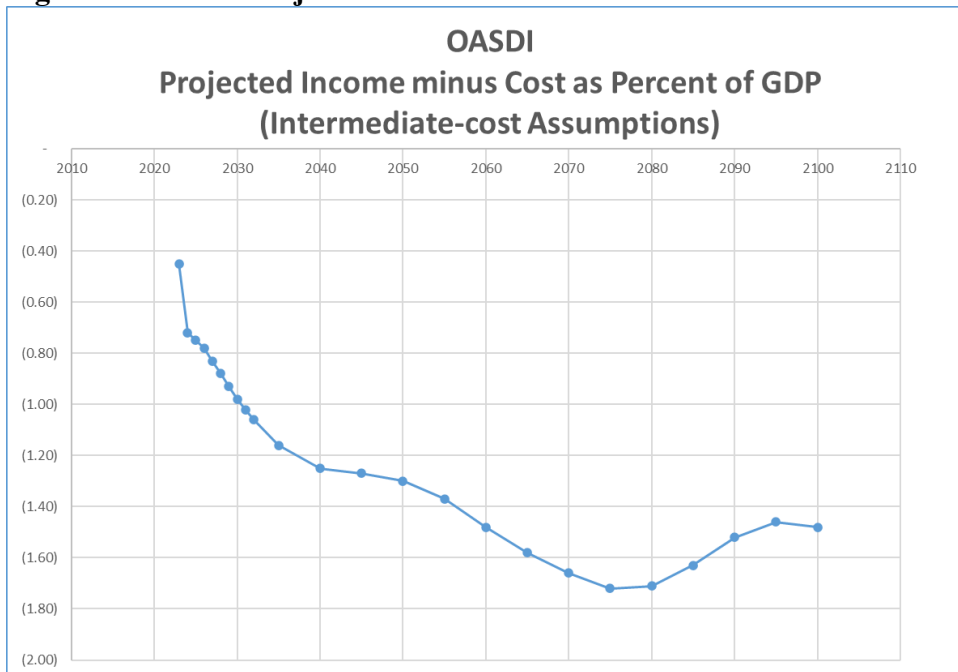
³³ While a large increase in taxes or a large decrease in benefits or some combination amounting to 25 percent, say, would technically remedy the shortfall, as a practical matter, this would never be approved by Congress.



Source: 2023 OASDI Trustees Report

Figure 3 shows the long-term projected shortfall (i.e., income minus benefit payments) as a percentage of projected GDP.

Figure 3. OASDI Projected Income Minus Cost as Percent of GDP



Source: 2023 OASDI Trustees Report

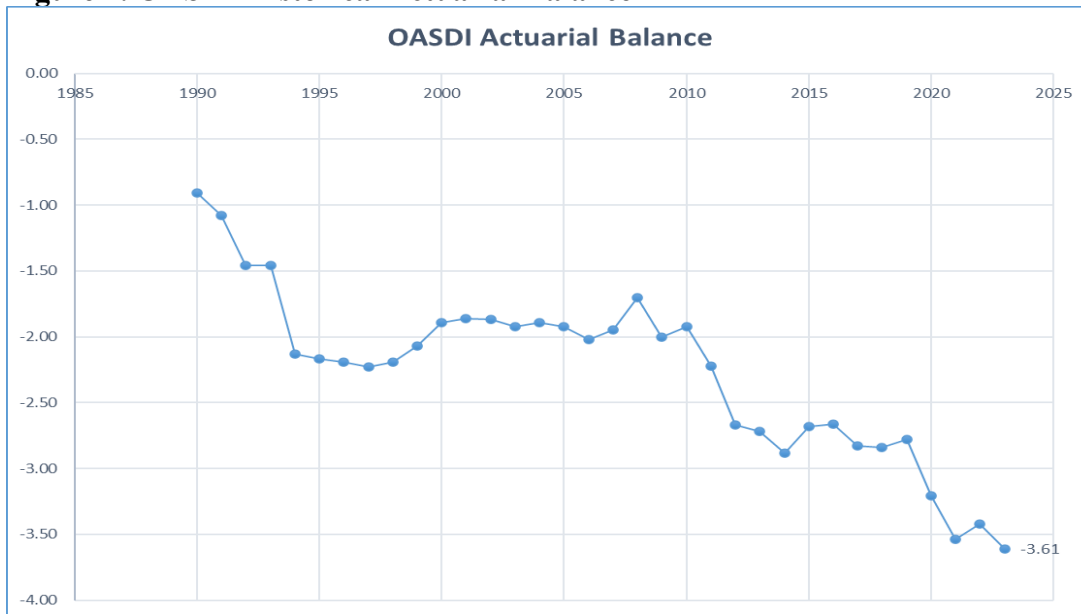
The way the Social Security actuaries express the amount of financing needed to cover benefit payments over the long term is called the “actuarial balance,” the additional percentage of

payroll necessary to be appropriated to the Trust Funds over the long term to pay all benefits under the current law when due (and have a reserve equal to the next year's benefits).

In the 2023 report of the OASDI Trustees, using the intermediate cost set of assumptions, this additional percentage was determined to be 3.62 percent for the OASI Trust Fund or 3.61 percent for the combined OASI and DI Trust Funds. In other words, the actuaries are saying that an additional combined contribution from employees and employers of 3.61 percent, starting immediately, is needed on top of the current 12.4 percent of covered payroll to pay benefits over the long term. This is a nearly 30 percent increase in the current rate.

This next chart shows how the actuarial balance has changed over the years. The increasing percentage of payroll illustrates how the combination of actuarial experience and lack of action taken by Congress to heed the emerging problem has led to a far more difficult financial and political spot than would have been the case had the problem been addressed sooner.

Figure 4. OASDI Historical Actuarial Balance



Source: 2023 OASDI Trustees Report

Table 2 Key Findings of the 2023 Trustees Report

	Social Security	
	OASI	DI
Type of benefit paid from the trust fund	Retirement and survivor benefits	Disability benefits
Full scheduled benefits are expected to be payable until	2033	At least through 2097
Percentage of scheduled benefits payable at time of reserve depletion	^a 77	—
75-year actuarial balance, as a percent of taxable payroll	-3.62	0.01

^a The percent of scheduled benefits payable is projected to decline to 71 percent by 2097.

Source: 2023 OASDI Trustees Report

Leaving aside that the needed additional 3.62 percent of taxable payroll in the 75-year projection is an estimate that is certain to be wrong (Burdick and Manchester 2003),³⁴ the projection is an unfortunate and misleading analysis that results in considerable “wheel-spinning” on the part of Congress (Munnell 2023)³⁵ and others (Stone and Trujillo 2023) as proposals are made to address the estimated long-term deficit. Mainstream proposals such as these are flawed in three important respects:

- They treat Social Security as if it was a private pension system with benefit cuts and/or increased funding being the only available remedies. As former Federal Reserve Chairs Greenspan and Bernanke have said, the federal government is not financially constrained (Allen 2011).

³⁴ Stochastic modeling by the Social Security actuaries shows a range of 0 to 10 percent of needed additional appropriations as a percentage of covered payroll in the 75-year projection.

³⁵ <https://www.ssa.gov/oact/solvency/provisions/index.html>.

- It has led to proposals that reduce benefits in some manner that disproportionately shift the financial burden to those least able to absorb it (American Academy of Actuaries 2023).³⁶
- They ignore the impact of productivity gains and productive capacity, or the lack thereof, to produce sufficient goods and services to satisfy retirees and others without causing inflation (Kelton 2022a).
- Because the underlying nature of the Trust Funds is an accounting allocation within the Treasury and because of the way funds flow, both described above, the Social Security system effectively operates on a pay-as-you-go basis (Center on Budget and Policy Priorities 2023).³⁷ In reality, no advance funding is taking place.³⁸

The value of payroll taxes ends up in the General Fund while benefits are paid from the General Fund, and the two are never equal. A positive difference provides funds available for other government purposes and decreases the deficit while a negative difference depletes the funds available for other purposes and increases the deficit, all other things being equal.³⁹

³⁶ Note how these suggestions conflict with recommendations to extend the normal retirement age, change the COLA mechanism, and other mainstream recommendations for extending Trust Fund solvency.

³⁷ <https://www.actuary.org/node/14008>

³⁸ This is also true for Part B of Medicare and for pension programs covering federal employees which, while ostensibly holding reserves and, unlike Social Security, amortizing actuarial gains and losses over a period of years, actuarially determined required funding in excess of employee contributions is provided by appropriated direct transfers from the Treasury's General Fund without a change in law.

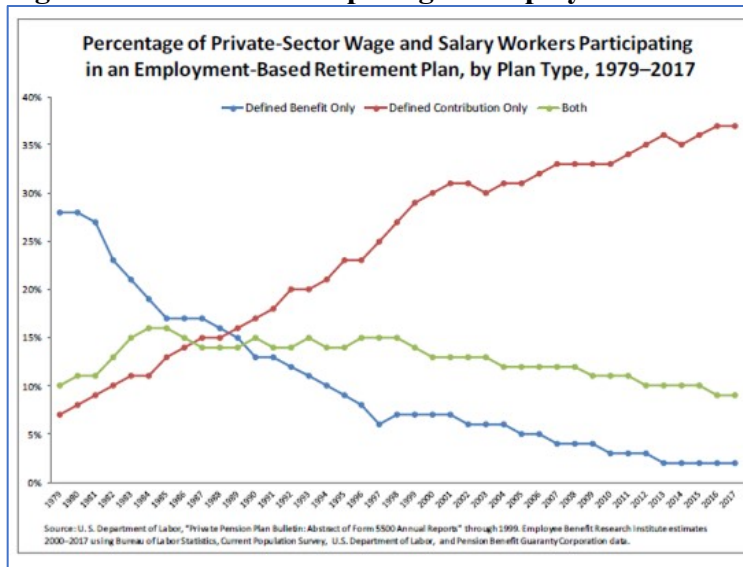
³⁹ Changes in the deficit result in changes in the amount of federal debt issuance and interest payments. For example, deficit reduction results in less federal debt issuance, all other things being equal. Therefore, if the OASI Trust Fund is growing (declining), the deficit is declining (growing) and federal debt in the hands of the public, along with interest payments thereon, would be declining (growing). Changes in Social Security taxes or benefits, all other things being equal, result in changes in federal debt issuance to the public and federal debt interest payments. OASI Trust Fund reserves (and other trust fund reserves invested in non-marketable government debt) have the effect of reducing the debt held by the public (Pattison 2015).

THE IMPORTANCE OF SOCIAL SECURITY BENEFITS TO FUTURE RECIPIENTS

While short-term projections of cash flow are certainly useful, the projections used by the Social Security actuaries and others fail to recognize potential future demand for increased benefits arising on account of inadequate and declining personal resources for retirement. The following few figures indicate the economic challenges facing future retirees.

Figure 5 shows the sharp decline in the percentage of workers in employer-sponsored defined benefit (DB) pension plans and the increasing percentage in defined contribution (DC) plans. DB plans have long been recognized as providing secure and adequate retirement income for career employees but have declined steadily since shortly after the passage of the Employee Retirement Income Security Act (ERISA), on January 1, 1975. On the other hand, DC plans shift a large portion of the burden of savings onto employees, many of whom, for various reasons, are unable to establish or maintain adequate balances as shown below.

Figure 5 Workers Participating in Employment-based Retirement Plans



Source: National Association of Plan Advisors (Adams 2019)

Table 3 shows the inadequacy of average 401(k) account balances by age according to Vanguard, the largest 401(k) plan administrator by assets under management.

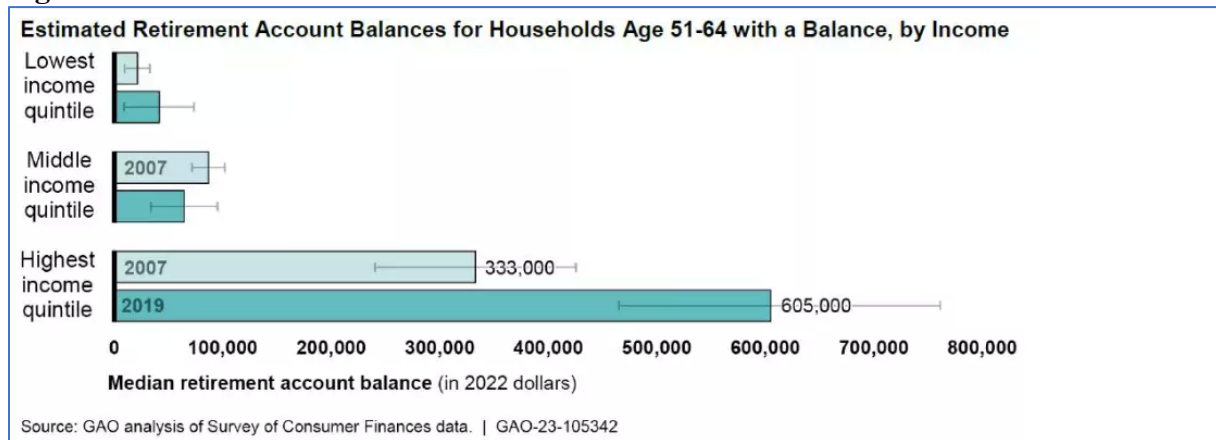
Table 3. Vanguard: How America Saves

Vanguard: "How America Saves 2023" Data	
Age Range	Average Retirement Savings
Under age 25	\$5,236
Ages 25-34	\$30,017
Ages 35-44	\$76,354
Ages 45-54	\$142,069
Ages 55-64	\$207,874
Ages 65+	\$232,710

Source: Synchrony Bank (Costa, n.d.).

The US Government Accounting Office Survey of Consumer Finances shows not only smaller retirement account balances for lower-income households but also lower balances for families with children and households with lower educational attainment.

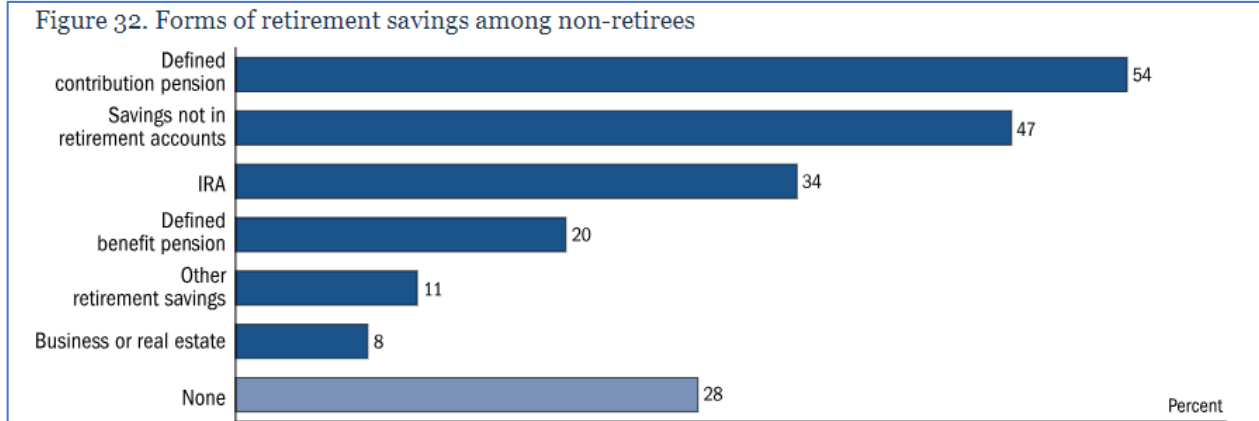
Figure 6. Estimated Retirement Account Balances



Source: General Accounting Office, <https://www.gao.gov/products/gao-23-105342>.

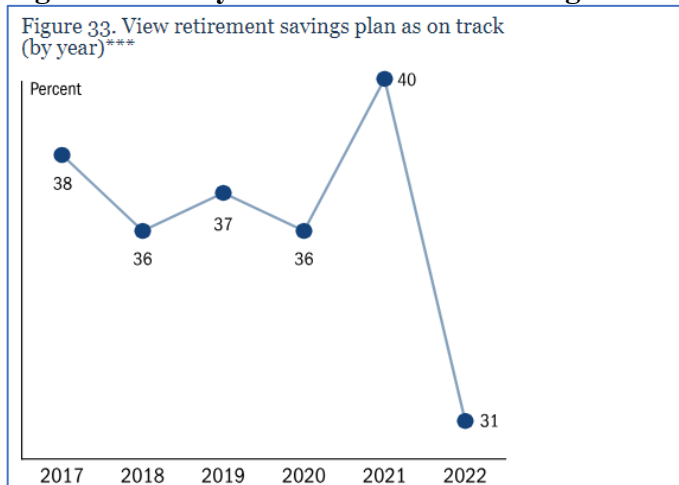
But there is more to the problem. Not only are 401(k) savings accounts inadequate on average, but according to the Federal Reserve, 28 percent of non-retired adults have no retirement savings at all and as few as 31 percent felt their retirement savings were on track. While a discussion of benefit adequacy is complex and beyond the scope of this paper, it is worth noting that, even with Social Security, in 2021, over 10 percent of adults age 65 and over are in poverty, many of whom are women and people of color (Romig 2023b).

Figure 7. Forms of Retirement Savings



Source: Federal Reserve, <https://www.federalreserve.gov/publications/2023-economic-well-being-of-us-households-in-2022-retirement-investments.htm>

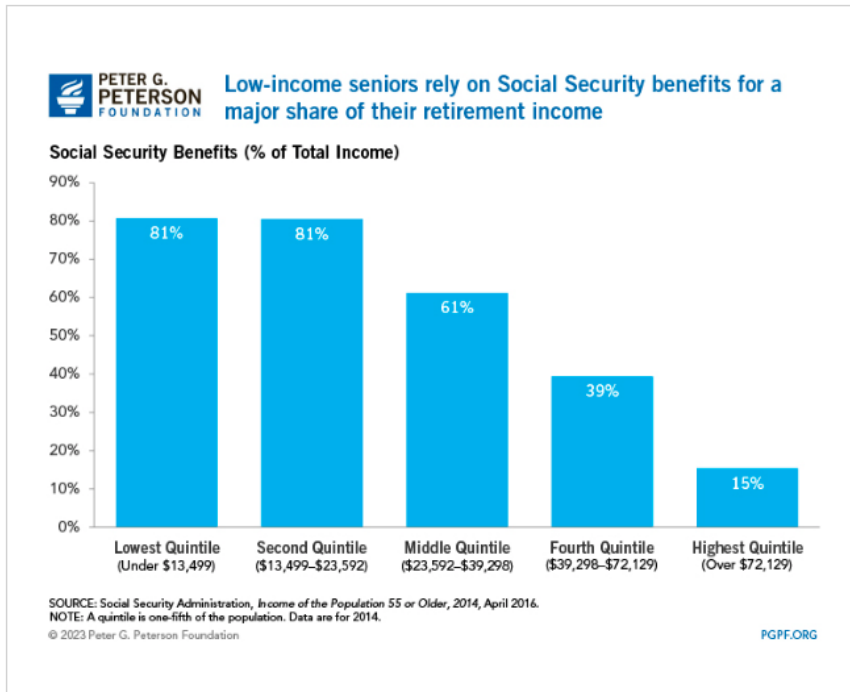
Figure 8. Survey: View Retirement Savings on Track



Source: Federal Reserve, <https://www.federalreserve.gov/publications/2023-economic-well-being-of-us-households-in-2022-retirement-investments.htm>

While the following chart is based on data from 2014, it is clear that Social Security is critically important to most retirees.

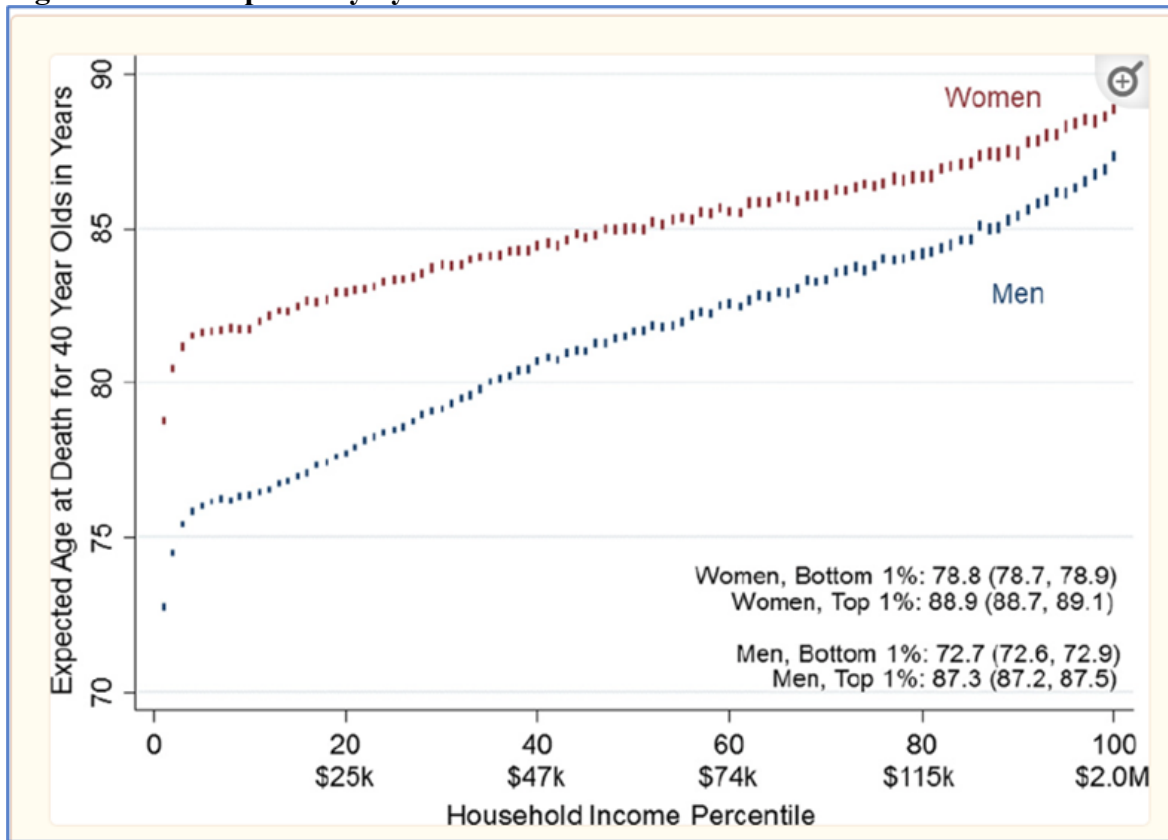
Figure 9. Social Security Benefits as a Percent of Total Income



Source: Peter G. Peterson Foundation, <https://www.pgpf.org/finding-solutions/retirement>

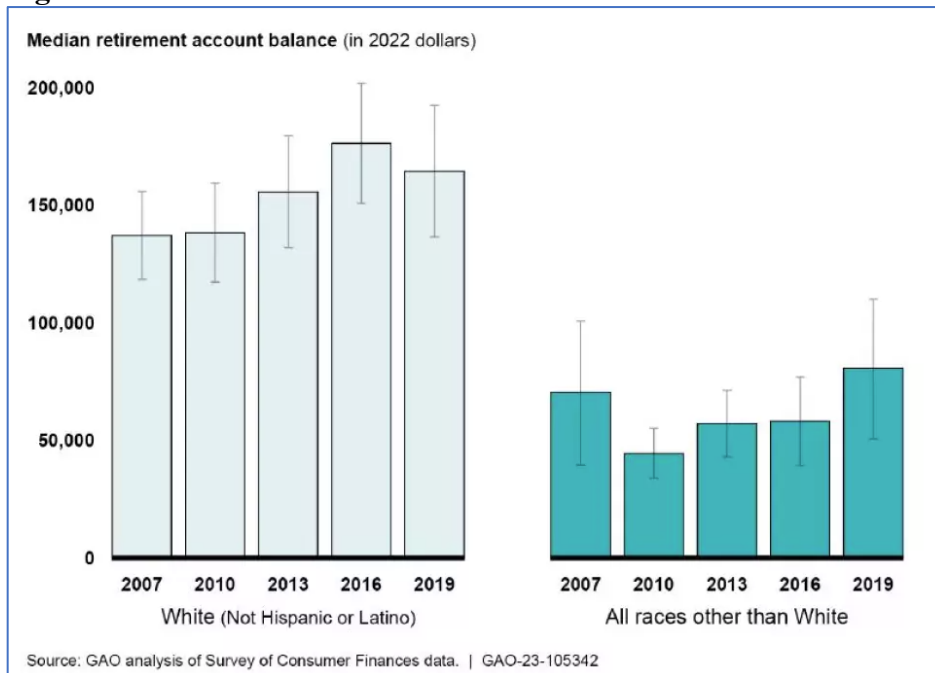
Not only are retirement savings inadequate on average but applying an across-the-board retirement age increase for unreduced benefits will most burden those at lower income levels who are more likely to have employment situations that adversely impact their ability to save for retirement and who can least afford it.

Figure 10 Life Expectancy by Household Income



Source: The Harvard Gazette (Reuell 2019)

Figure 11 Estimated Median Retirement Account Balances



Source: GAO analysis of Survey of Consumer Finances data. | GAO-23-105342

Source Government Accounting Office, <https://www.gao.gov/blog/growing-disparities-retirement-account-savings#:~:text=Income,contributions%20than%20low%2Dincome%20households.>

BASIS FOR RECOMMENDATIONS THAT FOLLOW

Recommendations made in the next section are based on the following considerations:

- Whether the issue is climate change, the nation's failing infrastructure, the deterioration in academic achievement for America's children (Schwartz 2023), or now, Social Security finances under current law, Congress's waiting until the last minute to address major problem areas only makes the inevitable effort more challenging. Unlike for the other issues, however, there's a hard deadline for Social Security. Under current projections, Congress will be forced to act in the next 10 years.
- The federal government is not like the private sector. It is not financially constrained. However, expenditure decisions need to consider the potential contribution to inflation (Kelton 2022c). And they need to do so by reflecting on which segments of society are most impacted by restraint.
- The amounts appropriated out of the General Fund of the Treasury to the OASI and DI Trust Funds are dictated by Section 201(a) of the Social Security Act. While those amounts are currently based on payroll taxes and interest on government bonds in the Trust Fund, nothing prevents the statutory language from being changed⁴⁰ as it was in 1981 and again in 1983 to provide for *any other amount* to be appropriated. In other words, it is not payroll tax dollars that are currently appropriated to the Trust Fund but a statutorily determined amount that can be changed through legislation.
- While current law requires the OASI Trust Fund be financed exclusively by dedicated taxes and interest on investments, this is not the case for the SMI Trust Fund (Parts B and D of Medicare), the Federal Employee's Retirement System, the Highway Trust Fund,⁴¹ the Military Retirement Fund, and others. No technicality prevents the OASI Trust Fund (or Medicare Part A, for that matter) from similarly accessing general revenues. In fact, given the solvency status of many trust funds, the General Accounting Office projects

⁴⁰ <https://www.ssa.gov/policy/docs/ssb/v46n9/v46n9p13.pdf>; Changing the language in the Social Security Act will need to occur in any event to support recommendations made here or by others.

⁴¹ <https://data.bts.gov/stories/s/Transportation-Economic-Trends-Government-Transportor/6bdc-i7mh/>

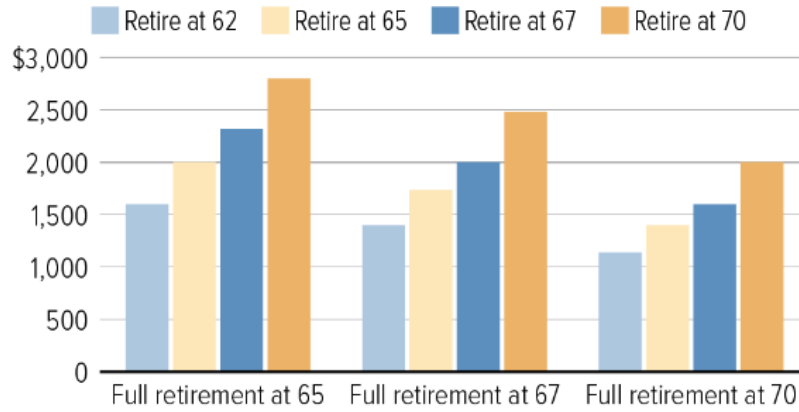
increased borrowing from the public as a consequence of drawing from general funds to support program payments (US GAO 2020).

- As non-marketable bonds in the Trust Funds are redeemed to pay Social Security benefits and those benefits are paid, the balance in the Treasury's General Fund could theoretically become depleted. Consequently, as long as the Treasury General Fund is prohibited from going negative (intra-day over-draughts excepted) and as long as the Treasury is prohibited from borrowing directly from the Federal Reserve, it will need to be restored by tax revenues or the sale of government bonds. There is no technical reason that Congress cannot suspend or remove these restrictions as it has done frequently in the past for the debt limit and pay-as-you-go (PAYGO) legislation.
- Technically speaking, setting aside statutory language restrictions, the elimination of the Trust Funds and the non-marketable bonds would have no financial impact on the Treasury. Social Security taxes would continue to be credited to the General Fund, benefits would continue to be paid from the General Fund, and changes in the federal deficit and debt would occur as before.⁴²
- Although it is currently being discussed by the likely Republican candidate for president (although his opinions keep changing) (Kaczynski 2023) and Republicans in Congress (Munnell 2023), it would be a tragedy to further reduce Social Security benefits by raising the retirement age or by any other means. Noting the inadequacy of private savings and retirement programs described above, benefit reductions of this type will have the greatest impact on those who are least able to absorb the reduction (Romig 2023).

⁴² Changes in the federal deficit are a result of the difference between tax revenue and expenditures, and that applies to Social Security taxes and benefits, as well.

Figure 12. Impact of Raising Social Security’s Full Retirement Age
Raising Social Security’s Full Retirement Age
Cuts Benefits for All New Retirees

Based on a \$2,000 monthly benefit at full retirement age



Note: The full retirement age is the age at which new retirees can receive full Social Security benefits. If beneficiaries claim before full retirement age, they receive permanently reduced monthly benefits; if they claim after, they get a permanent increase. Amounts use current law early retirement reduction and delayed retirement credit rates.

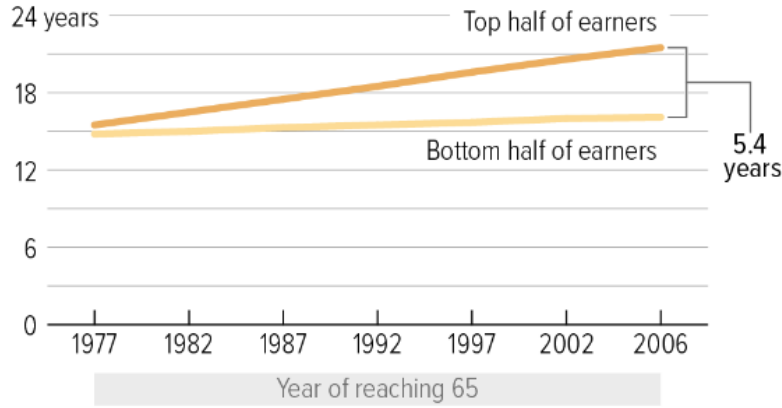
Source: CBPP analysis with Social Security Administration data

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Furthermore, the argument that increasing life expectancy justifies increasing Social Security’s normal retirement age for everyone falls apart when life expectancy is examined for different income groups and races.

Figure 13. Life Expectancy for Different Age Groups
Life Expectancy Rising Faster for Higher-Earning Men

Years of life expectancy once a man* reaches age 65



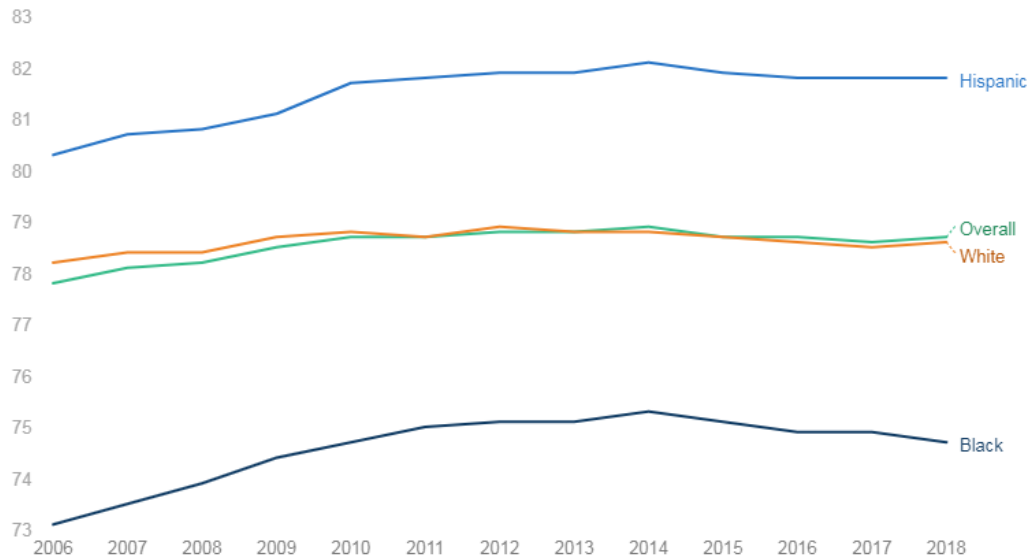
*Male Social Security-covered workers

Source: Hilary Waldron, "Trends in Mortality Differentials and Life Expectancy for Male Social Security-Covered Workers, by Socioeconomic Status," *Social Security Bulletin*, Nov. 2007

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Figure 14 Life Expectancy by Race and Ethnicity

Life Expectancy at Birth in Years, by Race/Ethnicity, 2006-2018



NOTE: Persons of Hispanic origin may be of any race but are categorized as Hispanic for this analysis; other groups are non-Hispanic. Data not available prior to 2019 for Asian and American Indian or Alaska Native (AIAN) populations because 2019 was the first year official US life tables included Asian and AIAN populations. Data for Native Hawaiian or Other Pacific Islander people were not available.
 SOURCE: Arias E, Xu JQ. United States life tables, 2020. *National Vital Statistics Reports*; vol 71 no 1. Hyattsville, MD: National Center for Health Statistics. 2022. • PNG



Source: KFF.org (Hill and Artiga 2023)

- Inflation is an important consideration as any set of proposals that has the net effect of increasing the deficit has the potential of being associated with inflation. But, correlation with inflation is not the same thing as causation (Bassetto and Butters 2010; Sill 2005). There can be many proximate causes of inflation but, fundamentally, it is a result of insufficient goods and services relative to demand (Wray and Nersisyan 2022) (Ryan, 2021). As former Federal Reserve chair Alan Greenspan has said (Greenspan 2005) and the Federal Reserve has reinforced,⁴³ the key to managing inflation is making sure fiscal policy results in providing adequate real resources to produce the goods and services demanded by retirees and others (Wray and Bell 2000).⁴⁴ It would be wrong-headed and cruel to burden those with the least resources with the job of controlling inflation using benefit reductions.
- While immigration plays a critical role in supporting growth in real resources and taking the pressure off of dependency ratios,⁴⁵ specific recommendations for addressing immigration are beyond the scope of this paper. In a report published by the American Academy of Actuaries, it is noted that an increase in immigration rates can reduce the deficit in the OASI and, by extension, the federal deficit.⁴⁶
- In reality, Social Security is a pay-as-you-go system with the Trust Funds operating as a political mechanism to force program revisions.
- Discussion of Social Security is incomplete without acknowledging the political elephant in the room: the portion of federal spending allocated to mandatory benefits. According to the Congressional Budget Office, Social Security and major health insurance programs (mostly Medicare and Medicaid) accounted for about 45 percent of all federal spending in fiscal 2022 (\$2.8 trillion), projected to increase to about 54 percent by 2033 (\$5.4 trillion). Social Security accounts for about 42 percent of this spending. According to the

⁴³ <https://www.stlouisfed.org/education/education-video-series/episode-1-money-and-inflation#:~:text=So%20what%20causes%20inflation%3F>.

⁴⁴ The bi-partisan Infrastructure and Investment Jobs Act of 2021, the Chips Act of 2022, and the Inflation Reduction Act of 2022 all took important and unprecedented steps toward making sure the economy produced the resources needed to tamp down the *potential* inflationary impact of a growing deficit.

⁴⁵ Generally, the dependency ratio puts a greater strain on payroll tax income as a source of Social Security funding.

⁴⁶ <https://www.actuary.org/node/14008>.

Congressional Budget Office, mandatory spending (largely Social Security and Medicare) is expected to rise to over 15 percent of GDP (Congressional Budget Office 2023).

Accordingly, for political and ideological reasons, those intent on reducing government spending identify Social Security (and various statutory health care programs) as the place to look with a bottom line of shifting the burden from the government to individuals who will predominantly be those at lower-income levels and least able to absorb the additional burden.

One of the ideas for accomplishing this in conservative circles (Altig and Gokhale 1997) is the privatization of Social Security, that is, shifting some or all Social Security funding to public markets. As a former pension actuary who has assisted many large corporations in the conversion of their defined benefit (DB) retirement plans to defined contribution (DC) or individual account plans, I can say that it is virtually impossible to replicate, not to mention improve upon, DB benefits through a DC structure, especially at equal cost.

The first thing to note is that if the objective is to reduce the government's deficit through a combination of reduced benefits and/or increased payroll taxes, the mathematical relationship of the sectoral balance (Activist #MMT, n.d.) makes clear that the private sector will be worse off, that is, will have less economic value in the aggregate, all other things being equal.

Since the private sector represents a heterogeneous amalgam of economic units (people and organizations) and since, as will be shown below, retirement benefits would be reduced under any form of privatization that results in deficit reduction, the economic units most affected by privatization would be those most economically vulnerable.

While it is unclear exactly how privatizing Social Security would be accomplished, if the idea is to replace some or all of the DB structure of the current Social Security program with an individual account DC-type structure, there are quite a few problems and misconceptions to be addressed regardless of program details. While seeing that the private sector would be worse off

should be enough to convince legislators to abandon privatization and informed voters to reject it, there are design problems that are also worth mentioning, including:

- Program costs would rise substantially if the objective was to protect retiree benefits from market volatility.
- Program costs would rise substantially if the objective was to protect retirees from inflation as provided under Social Security currently.
- As individual accounts take decades to build up, protecting current and near-future retirees would make the cost of transition prohibitive.
- To the extent private investment firms are given a role in money management, the added cost would not be immaterial (no wonder these firms favor the idea of privatization).
- Investing Treasury assets (or future employee and employer contributions destined to become Treasury assets) in equities would do nothing to grow the economy but rather would simply reallocate market gains (and losses) among a different (broader) group of investors.
- Providing a progressive benefit formula as under the current program would be impossible with a program based on individual account balances.
- Individual account retirement plans are not suited for providing supplemental benefits for survivors and/or dependents.

In other words, it would be virtually impossible to replicate, much less improve upon, the benefits provided under the current Social Security program.

RECOMMENDATIONS

My recommendations have been informed by and, in some cases are very similar to, those presented by Robert Eisner in 1998 (Eisner 1998) and in his many other publications, by Stephanie Kelton (2022b) and elsewhere, and by L. Randall Wray (1999) and elsewhere.

- First, do no harm. Do not reduce Social Security benefits by increasing the normal retirement age (or by any other means).⁴⁷
- With an annual shortfall in the OASI Trust Fund increasing from about \$82 billion to \$428 billion over the next 10 years,⁴⁸ greater than can be supported by transfers from the DI or Medicare Part A Trust Funds, the only way the OASI Trust Fund can be prevented from becoming insolvent and forcing a severe reduction in benefit payments, is to maintain scheduled benefit payments with general revenues not restricted to tax revenues. This can be achieved in one of several ways, for example:
 - Permit the Trust Fund to borrow from the General Fund. Such borrowings would become non-marketable bonds with the proceeds returning to the General Fund to satisfy scheduled benefit payments.
 - Increase the amount of non-marketable bonds and/or interest credits (Kelton 202, 186)⁴⁹ in the Trust Fund without regard to appropriated tax revenues. Set the increase to be of sufficient size to prevent future insolvency and to provide enough time to make considered and constructive changes to the program (Wray 2002). If the volume of non-marketable bonds proves excessive over time, the “excess” can be redeemed with no impact on the Treasury or the nation’s finances.⁵⁰
- Decouple taxes from Social Security. Eliminate regressive *employee* OASI payroll taxes and replace them with an across-the-board percentage increase in the tax rates applicable to total taxable income such that total federal income taxes are unchanged. Continue *employer* payroll taxes so that even employers with no business income taxes will

⁴⁷ It is inexplicable why consideration is being made to increase the normal (full benefit) retirement age under Social Security when no such suggestion is being made for the Federal Employees Retirement System (covering members of Congress and other federal employees) which, in part, depends on financing from general revenues. If increasing the normal retirement age is unavoidable politically, offset the impact on lower-wage employees through increases in the Primary Insurance Amount or some other means.

⁴⁸ https://www.ssa.gov/oact/TR/2023/IV_A_SRest.html#506116

⁴⁹ An increase in interest credits is tantamount to statutorily increasing non-marketable bonds because the interest credits are immediately converted to bonds.

⁵⁰ Increasing the non-marketable bonds now in sufficient size to protect against insolvency will bring the value of those bonds into the new federal debt limit that becomes effective in January 2025 under the Fiscal Responsibility Act of 2023.

continue to provide a source of deficit reduction. The initial net effect of this recommendation would be no change in total personal income taxes collected by the federal government but would reallocate them with the same progressiveness as personal income taxes today (Parys and Orem 2024).⁵¹

- Increase the applicable combined income bands that subject Social Security benefits to income taxation.⁵²
- Eliminate the Trust Funds to restore clarity and fiscal honesty to the Social Security program.⁵³
- Use the annual, long-term 75-year projections made by the Social Security actuaries to formulate a program of gradually increasing federal income tax rates subject to emerging productive capacity to offset inflationary impulses. In one analysis, a continuation of the increase in worker productivity over the last 30 years would be sufficient to care for future retirees without increasing the burden on future workers (Nersisyan, Liu, and Wray 2023).
- Recognizing that human capital is a key component of real resources necessary to manage inflation and support Social Security, ensure that immigration policy supports that goal.⁵⁴
- Focus on cash flow management of the Treasury General Account to support committed past and expected future federal expenses with an adequate margin to avoid political brinkmanship and support rational fiscal policymaking.

⁵¹ In 2022, individual income taxes amounted to \$2.632 trillion, OASDI taxes amounted to \$1.1 trillion of which approximately \$471 billion were OASI contributions by employees. Therefore, employee OASI tax payments amounted to about 18% of individual income taxes collected. Therefore, replacing OASI taxes (6.2%) with an across-the-board level percentage increase would mean that individual income taxes would be increased by about 18%. Based on the 2023 individual income tax brackets, replacing the OASI taxes with an increase of 18% in individual income taxes would result in a *decrease* in the marginal income tax rate for individuals with taxable income less than \$231,50 and those “married filing jointly” taxable income less than \$462,500; <https://www.cbo.gov/publication/58891#:~:text=Revenues%20received%20by%20the%20federal,percentage%20of%20gross%20domestic%20product;https://www.ssa.gov/oact/STATS/table3c3.html>.

⁵² <https://www.ssa.gov/benefits/retirement/planner/taxes.html>

⁵³ The elimination of the OASI Trust Fund would have many advantages, including the elimination of the accounting fiction and the restoration of rational fiscal policy decision-making.

⁵⁴ <https://www.actuary.org/node/14008>.

- Making sure Social Security is solvent in financial terms is not a guarantee that sufficient real resources will be available to absorb future demand, potentially contributing to inflation. Therefore, the aim should be to pursue an aggressive industrial and educational policy to build and secure critical resources, address infrastructure repair and development (especially as relates to threats from climate change), and increase labor force skills and participation (Kelton 2020, 187; Nersisyan, Liu, and Wray 2023).

A FINAL THOUGHT

To an increasing degree, the needs of the elderly are growing faster than their ability to pay for them. Meanwhile, the nation has a solemn commitment to ensuring its seniors are able to live in dignity. However, with few exceptions, considerations for addressing the depletion of the OASI Trust Fund by adjusting benefits is a curtailment of that commitment.⁵⁵

This paper shows that changes can be made that will preserve and protect the current Social Security program indefinitely. Some will see these changes as wrong-headed as, sooner or later, they may lead to an increasing federal deficit. I don't deny it, but how is this different from other critical national commitments, such as those protecting the health and safety of citizens or, for that matter, payment of pensions to federal workers or military personnel, or benefits under the Supplemental Medical Insurance Trust Fund (Parts B and D of Medicare)?

The United States is among a select group of nations that can pay for whatever it deems important. It should not use Social Security as a political tool to shift the burden onto those least able to support it when other policy prescriptions (for example, allowing people at lower ages to participate in Medicare if they choose to do so) can be more effective with less impact on the majority of Americans, especially those at lower income levels, people of color and women (Wager et al. 2024).

⁵⁵ <https://www.ssa.gov/oact/solvency/provisions/index.html>; <https://www.actuary.org/category/site-section/public-policy/pension/pension-social-security>.

REFERENCES

- Activist #MMT. n.d. “The MMT View of Sectoral Balances.” Updated October 25, 2022. <https://activistmmt.org/sectoral-balances/>.
- Adams, N. E. 2019. “Random Thoughts.” *National Association of Plan Advisors*, October 15, 2019, <https://www.napa-net.org/news-info/daily-news/random-thoughts>.
- Allen, P. “No Chance of Default, US Can Print Money: Greenspan,” *CNBC*, August 9, 2011, <https://www.cnn.com/id/44051683>.
- American Academy of Actuaries. 2023. “Social Security and Financially Disadvantaged Groups.” Public Policy Issue Paper. <https://www.actuary.org/sites/default/files/2023-11/pension-paper-disadvantaged-populations.pdf>.
- “Speech, Bernanke --Deflation-- November 21, 2002,” n.d. <https://www.federalreserve.gov/BOARDDOCS/Speeches/2002/20021121/default.htm>.
- Altig, D. and Gokhale, J. 1997. “Social Security Privatization: One Proposal.” Cato Institute Social Security Choice Paper No. 9. <https://www.cato.org/social-security-choice-paper/social-security-privatization-one-proposal>
- Bassetto, M. and R. A. Butters. 2010. “What Is the Relationship between Large Deficits and Inflation in Industrialized Countries?” *Economic Perspectives* 34(3). <https://www.chicagofed.org/publications/economic-perspectives/2010/3qbassetto-butters>.
- Burdick, C. and J. Manchester. 2003. “Stochastic Models of the Social Security Trust Funds.” Social Security Administration Research and Statistics Note No. 2003–01. <https://www.ssa.gov/policy/docs/rsnotes/rsn2003-01.html#:~:text=The%20stochastic%20model%20used%20in,over%20the%20next%2075%20years>.
- Cagetti, M., M. Hoops, S. McIntosh, and R. Ogden. 2015. “Federal debt in the financial accounts of the United States.” *FEDS notes* of the Board of Governors of the Federal Reserve System. <https://www.federalreserve.gov/econresdata/notes/feds-notes/2015/federal-debt-in-the-financial-accounts-of-the-united-states-20151008.html>
- Center on Budget and Policy Priorities. n.d. “Policy basics: Understanding the Social Security trust funds.” Updated April 17, 2023. <https://www.cbpp.org/research/policy-basics-understanding-the-social-security-trust-funds>
- Congressional Budget Office. 2023. “The budget and economic outlook: 2023 to 2033.” <https://www.cbo.gov/publication/58946>

- Costa, D. L. 1998. “Appendix A: Union Army Pensions and Civil War Records,” in *The Evolution of Retirement: An American Economic History, 1880-1990*, 197–212. Chicago: University of Chicago Press. <https://www.nber.org/system/files/chapters/c6116/c6116.pdf>
- Costa, M. n.d. “What’s the Median Retirement Savings by Age?” *Synchrony*, September 8, 2023, <https://www.synchronybank.com/blog/median-retirement-savings-by-age/>.
- Eisner, R. 1998. “Save Social Security from Its Saviors.” *Journal of Post Keynesian Economics* 21(1): 77–92. <https://vdocuments.net/robert-eisners-save-social-security-from-its-saviors.html>.
- “Financial Report of the United States Government - Financial Statements of the United States Government for the Fiscal Years Ended September 30, 2022, and 2021,” n.d. <https://fiscal.treasury.gov/reports-statements/financial-report/balance-sheets.html>. <https://www.fiscal.treasury.gov/files/reports-statements/financial-report/2022/notes-to-the-financial-statements22.pdf>
- . 2020. “Federal Trust and Other Dedicated Funds: Fiscal Sustainability Is a Growing Concern for Some Key Funds.” Report to Congressional Requesters. <https://www.gao.gov/assets/gao-20-156.pdf>
- Greenspan, A. 2005. “Future of Social Security program and economics of retirement,” testimony before the Special Committee on Aging, US Senate, March 15, 2005. Federal Reserve Board. <https://www.federalreserve.gov/boarddocs/testimony/2005/20050315/default.htm>.
- Hansan, J. E. 2011. “English Poor Laws: Historical Precedents of tax-supported relief for the poor.” *Social Welfare History Project*, retrieved December 1, 2016. <https://socialwelfare.library.vcu.edu/programs/poor-laws/>.
- Hill, L. and Artiga, S. 2023. “What is Driving Widening Racial Disparities in Life Expectancy?” *KFF*, May 23, 2023, <https://www.kff.org/racial-equity-and-health-policy/issue-brief/what-is-driving-widening-racial-disparities-in-life-expectancy/>
- Huston, B. F. 2022a. “Social Security: Trust Fund Status in the Early 1980s and Today and the 1980s Greenspan Commission,” *Congressional Research Service*, March 4, 2022, <https://crsreports.congress.gov/product/pdf/R/R47040>
- . 2022b. “Social Security: What Would Happen If the Trust Funds Ran Out?” *Congressional Research Service*, Updated September 28, 2022, <https://sgp.fas.org/crs/misc/RL33514.pdf>

- Iekel, J. 2018. "Retirement: An Historical Perspective," American Society of Pension Professionals & Actuaries. October 5, 2018. <https://www.asppa.org/news/browse-topics/retirement-historical-perspective>.
- Isaacs, K. P. 2019. "Federal Employees' Retirement System: Budget and Trust Fund Issues." *Congressional Research Service*, December 13, 2019, <https://sgp.fas.org/crs/misc/RL30023.pdf>
- Kaczynski, A. 2023. "Trump previously backed policies on Social Security for which he's now attacking DeSantis, calling the program a 'Ponzi scheme.'" *CNN*, April 27, 2023, <https://www.cnn.com/2023/04/27/politics/trump-desantis-social-security-ponzi-scheme/index.html>
- Kelton, S. 2022a. "Can we still afford Social Security and Medicare?" *The Lens* (blog), August 21, 2022. <https://stephaniekelton.substack.com/p/can-we-still-afford-social-security>
- . 2022b. "What FDR and Two Former Fed Chairs Understood about Social Security." *The Lens* (blog), June 30, 2022. <https://stephaniekelton.substack.com/p/what-fdr-and-two-former-fed-chairs>.
- . 2022c. "Inflation." *The Lens* (blog), June 25, 2022. <https://stephaniekelton.substack.com/p/inflation>
- . 2020. "The Deficit Myth: Modern Monetary Theory and the Birth of the People's Economy." *Climate Change and Law Collection*. https://doi.org/10.1163/9789004322714_cclc_2020-0186-1044.
- Munnell, A. H. 2023. "Congressional Republicans Want Big Cuts to Social Security." Center for Retirement Research, July 11, 2023, <https://crr.bc.edu/congressional-republicans-want-big-cuts-to-social-security/>.
- . "Congressional Republicans Want Big Cuts to Social Security." *MarketWatch*, July 11, 2023, <https://www.marketwatch.com/story/congressional-republicans-want-big-cuts-to-social-security-9073a690>.
- Nersisyan, Y., Liu, X, and L. R. Wray. 2023. "The Unbearable Weight of Aging: How to Deal with the 'Demographic Time Bomb.'" Working Paper No. 1018. Levy Economics Institute. <https://www.levyinstitute.org/publications/the-unbearable-weight-of-aging>
- Parys, S. and T. Orem. 2024. "2023-2024 Federal Tax Brackets and Income Tax Rates." *NerdWallet*, January 8, 2024. <https://www.nerdwallet.com/article/taxes/federal-income-tax-brackets#2023%20tax%20brackets>.

- Pattison, D. 2015. "Social Security Trust Fund Cash Flows and Reserves." Social Security Administration, *Social Security Bulletin* 75(1).
<https://www.ssa.gov/policy/docs/ssb/v75n1/v75n1p1.html>.
- Penner, R. G. n.d. "The Greenspan Commission and the Social Security Reforms of 1983." The Urban Institute. <https://www.urban.org/sites/default/files/publication/65126/2000323-Myth-and-Reality-of-the-Safety-Net-The-1983-Social-Security-Reforms.pdf>.
- "Presentations of the Office of the Chief Actuary," n.d. <https://www.ssa.gov/oact/presentations/>.
 See: "Social Security and Medicare: State of the Systems," October 15, 2023, Presentation to the Conference of Actuaries
- Reuell, P. 2019. "For Life Expectancy, Money Matters." *Harvard Gazette*, March 15, 2019,
<https://news.harvard.edu/gazette/story/2016/04/for-life-expectancy-money-matters/>.
- Robinson, S. 2023. "History and Future of the Social Security Trust Fund, Part I." The Concord Coalition Issue Brief. Accessed October 10, 2023.
<https://www.concordcoalition.org/issue-brief/history-of-social-security-part-1/>.
- Roche, C. 2010. "What Are Bank Reserves?" *Pragmatic Capitalism*, October 6, 2010.
<https://www.pragcap.com/what-are-bank-reserves/>.
- Romig, K. 2023a. "Raising Social Security's retirement age would cut benefits for all new retirees." *Center on Budget and Policy Priorities*, April 25, 2023.
<https://www.cbpp.org/research/social-security/raising-social-securitys-retirement-age-would-cut-benefits-for-all-new>
- . 2023b. "Social security lifts more people above the poverty line than any other program." *Center on Budget and Policy Priorities*, January 31, 2024.
<https://www.cbpp.org/research/social-security/social-security-keeps-22-million-americans-out-of-poverty-a-state-by-state>
- Ryan, James, October 2021. *Federal taxes do not finance spending, and Cost-Benefit analysis must change*. (n.d). Georgetown Environmental Law Review | Georgetown Law.
<https://www.law.georgetown.edu/environmental-law-review/blog/federal-taxes-do-not-finance-spending-and-cost-benefit-analysis-must-change/>
- Schobel, B. D. 1983. "Interfund Borrowing Under the Social Security Act." *Social Security Bulletin* 46(9). <https://www.ssa.gov/policy/docs/ssb/v46n9/v46n9p13.pdf>
- Schwartz, S. 2023. "Reading and Math Achievement Is Getting Worse, Nation's Report Card Shows." *Education Week*, June 21, 2023. <https://www.edweek.org/leadership/reading-and-math-achievement-is-getting-worse-nations-report-card-shows/2023/06#:~:text=Scores%20for%2013%2Dyear%2Dolds,widespread%20declines%20in%20student%20achievement.>

- Shmerling, R. H. 2022. “Why Life Expectancy in the US Is Falling.” *Harvard Health*, October 20, 2022. <https://www.health.harvard.edu/blog/why-life-expectancy-in-the-us-is-falling-202210202835#:~:text=A%20dramatic%20fall%20in%20life,justyle%20galleryst%20over%2076%2C%20in%202021>.
- Sill, K. 2005. “Do Budget Deficits Cause Inflation?” *Business Review of the Philadelphia Fed*. https://www.philadelphiafed.org/-/media/frbp/assets/economy/articles/business-review/2005/q3/q3_05_sill.pdf?la=en
- Social Security Administration. n.d. “Federal Old-Age and Survivors Insurance Trust Fund and Federal Disability Insurance Trust Fund” *Social Security Act §201 [42 U.S.C. 401]*. https://www.ssa.gov/OP_Home/ssact/title02/0201.htm.
- Stone, L. K. and G. Trujillo. 2023. “Reforming Social Security Sooner Rather than Later.” American Academy of Actuaries Issue Brief. <https://www.actuary.org/sites/default/files/2023-11/pension-brief-social-security-reform-sooner.pdf>.
- US Department of The Treasury. 2023. “TREASURY ANNOUNCES NEW CASH MANAGEMENT TOOL.” Press Release, October 27, 2023. <https://home.treasury.gov/news/press-releases/js946>.
- US Department of Transportation, Bureau of Transportation Statistics, n.d. “Transportation Economic Trends: Government transportation revenue - trust funds. <https://data.bts.gov/stories/s/Transportation-Economic-Trends-Government-Transpor/6bdc-i7mh/>
- US General Account Office. 2001. “Federal Trust and Other Earmarked Funds: Answers to Frequently Asked Questions.” <https://www.gao.gov/assets/gao-01-199sp.pdf>
- Wager, E., M. McGough, S. Rakshit, K. Amin, and C. Cox. 2024. “How does health spending in the U.S. compare to other countries?” Peterson-KFF Health System Tracker. <https://www.healthsystemtracker.org/chart-collection/health-spending-u-s-compare-countries/#Health%20expenditures%20per%20capita,%20U.S.%20dollars,%20PPP%20adjusted,%202022>
- Waite, E. F. 1893. “Veteran’s Pensions: The Law and Its Administration From the Revolutionary War to the Civil War.” Social Welfare Project, accessed June 15, 2020. <https://socialwelfare.library.vcu.edu/social-security/veterans-pensions-early-history/>.
- Wray, L. R. 1999. “Does Social Security Need Saving?: Providing for Retirees throughout the Twenty-First Century.” Public Policy Brief Highlight No. 55A, Levy Economics Institute. <https://www.levyinstitute.org/publications/?docid=1020>.

———. 2002. “Social Security - Truth or Useful Fictions.” Center for Full Employment and Price Stability Research Archive, Policy Note 2002/04.
<https://edi.bard.edu/research/notes/cfeps-pn-0204-social-security-truth-or-useful-fictions-l-randall-wray>

Wray, L. R. and S. Bell. 2000. “Financial Aspects of the Social Security ‘Problem.’” *Journal of Economic Issues* 34(2). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1010338.

Wray, L. R. and Y. Nersisyan. 2022. “What’s Causing Accelerating Inflation: Pandemic or Policy Response?” Working Paper No. 1003. Levy Economics Institute.
<https://www.levyinstitute.org/publications/whats-causing-accelerating-inflation-pandemic-or-policy-response>.

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