Political Limitations of Social Security

Social Security is insolvent. If no changes are made to advert the crisis, Social Security's trust fund will run out of assets in 2034 (SSBT, 2023). After depletion, benefits will need to be cut by 22% (SSBT, 2023). Believe it or not, solving Social Security's actuarial deficit is not a challenging mathematical problem. Each year the program's trust fund balance will increase (or decrease) by the difference between its inflows and outflows. Therefore, the two most basic levers are either increasing inflows (a.k.a. taxes) or decreasing outflows (a.k.a. benefits). Alternatively, you could chase higher yields on the assets backing the trust fund. However, I plan to focus on the raising taxes and the reducing benefits pieces because they are directly controlled by politicians. While Social Security may not be a difficult mathematical problem, it is a challenging political problem. For example, the last significant piece of legislation passed was the Social Security Amendments of 1983 (Martin & Weaver, 2005). Social Security reform is taboo in politics because raising taxes and cutting benefits are both unpopular with the electorate (Turner, 2017). Therefore, we find ourselves in a conundrum. Unfortunately, if we continue down this path of inaction, Social Security's trust funds will run out, which, will reduce retirement benefits for millions.

Let us now focus on how these two levers can be pulled. The policy options available for politicians to increase taxes or reduce benefits are technically infinite. In terms of raising taxes, politicians could raise the base FICA tax rate. The Social Security tax rate is 12.4% (OCAa) of the first 160,200 in payroll income as of 2023 (OCAb). 6.2% is paid by the employee and 6.2% is paid by the employer. The revenues collected from this tax are distributed to beneficiaries or contributed to the trust fund for future use. An alternative is to tax income above $160,200 at the same rate as pre-160,200 dollars, which is similar to how Medicare is taxed[1]. The Committee for a Responsible Budget estimates that implementing such a measure would reduce the actuarial deficit by 63% and push back the depletion date to 2059 (CRFB). Additionally, one could tax other sources of income (e.g. capital gains) or employ combinations of the methods discussed above.

Cutting benefits is the other main lever politicians can pull. Cutting benefits is not about just reducing future retiree benefits (although that is certainly a method) but can be more subtle. Proposals to raise the retirement age are a form of "benefit cutting." By raising the retirement age, people will be forced to work longer and will thus receive less benefits. Other solutions include means-testing benefits (people with higher incomes have their benefits cut), increasing early retirement penalties (people electing early retirements receive larger reductions on their base benefits) or adjusting benefit inflation. Like taxes, the options available are infinite.

However, with unlimited options, politicians seem to pick the worse one: inaction. Each year, the Social Security report comes out and, each year, the Social Security Board of Trustees report an actuarial deficit. They reported a depletion date of 2034 in the 2023 report, 2035 in the 2022

[1] The Base Medicare tax is 2.9% (1.45% by employees and 1.45% by employers) on all payroll income. An additional 0.9% tax is imposed on income above $200,000 for individuals and above $250,000 for married filers filing jointly (OCAa).

report, 2034 in the 2021 report, 2035 in the 2020 report, etc. (SSBT, 2023, SSBT, 2022, SSBT, 2021 & SSBT, 2020). This highlights short-sighted calculus. Continuous inaction will increase the magnitude of future actions needed to save the program. Each year is a missed opportunity because the Social Security trust fund balance is fundamentally equivalent to the following recursive equation (TF = "Trust Fund" and t = calendar year).

$$TF\ Balance\ (t) = TF\ Balance\ (t-1) + Taxes(t) - Benefits(t) + Interest(t)$$

By not adjusting taxes or benefits, the trust fund balance at the end of the year will be too low. This will compromise future trust fund balances by the nature of the recursive equation. In addition, interest earned will also be lower since the asset base (the trust fund balance) is relatively low. If we extend this logic out many years, the deficiency compounds.

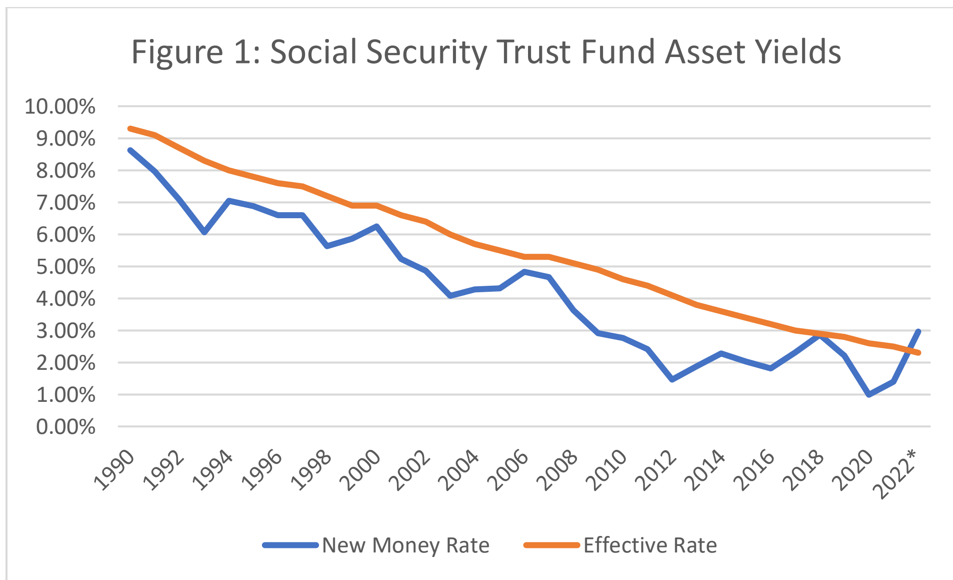
Social Security is much like the number on the scale. Eat poor or do not exercise for a couple months and maybe you will gain five pounds. Continue these bad habits for a full year and you may put on 30-40 pounds. Losing five unwanted pounds is easier than losing 30-40 pounds. In essence, correcting one month of unhealthy habits is a lot easier than correcting a full year of bad habits. In the Social Security context, we need to correct 30 years of inaction (noting this is of course not a one-to-one comparison with eating and exercise habits). However, correcting 30 years is less costly than correcting 40 years of inaction (as of 2034/2035). To highlight this tradeoff, I will cite the figures projected by the Trustees. It is projected that the base payroll tax rate will need to increase by 3.44% today to make the program solvent and 3.61% in 2034 after depletion which is a 29% relative increase (SSBT, 2023). A similar relationship applies for benefit reductions.

Before I offer my solution, I will quickly discuss how Social Security financially deteriorated. America's largest generation is the Baby Boom generation who were born after World War II. This generation has begun to retire, increasing the ratio of the retirement population to the working age population. For instance, the CBO estimates that 17.1% of the population is 65 years or older in 2022, and projects this ratio to rise to 21.5% in 2042 (CBO, 2022). In addition, fertility rates have severely declined since the Financial Crisis.[2] As such, not enough babies are being born to replace workers that are retiring. Immigration also affects this "retiree ratio." If more immigrants come into the country the amount of tax revenue (from more wages) increases. Lastly, the increase in life expectancy also explains part of the deterioration. As mortality improved in the 20th century because of smoking cessation, heart disease reduction and other medical improvements, Social Security benefits increased (Goss, et al, 2015).

In addition to the demographic side of the equation, I must discus interest rates. Interest rates over the last 30 years have declined. The trust fund invests into special issue treasury securities which are linked to treasury rates (42 U.S.C. § 401(d)). When interest rates decline, the trust fund portfolio yields less. Figure 1, below, summarizes the portfolio rate of the trust funds and the new money rate from 1990 to 2022. When Social Security invested in long duration special issue securities after the Financial Crisis (when interest rates bottomed out), it hamstrung itself. At that point Social Security faced limited interest rate risk (unless you believe in negative interest

[2] Fertility rates were also trending downwards since before the great financial crisis (SSBT, 2023).

rates). Therefore, the asset-liability duration mismatch would not matter significantly since interest rates could only increase from near zero. 10 years later (i.e. to present day), interest rates began to creep up which led to the new money rates increasing above the effective portfolio rate as seen in Figure 1. However, Social Security is not able to fully capitalize on rising interest rates because it had locked in the low post-Great Financial Crisis rates. In Table 1 below, I summarize the trust fund portfolio as of December 31st, 2022. For ranges of maturities, assume that individual maturities allocated pro rata for each year as this is consistent with Social Security's investment strategy (SSBT, 2023). Note that its largest group of bonds is valued at $616 billion, maturing from 2024-2034. This group is locked in at a rate of 2.25%. The new money rate as of December 31st, 2022 is roughly 3% and is likely higher today. If Social Security had invested in shorter-term bonds during the low-rate years[3], it would have been able to capitalize on rising interest rates because it could turn over its portfolio quicker. Further, rising interest rates were accompanied by high inflation and Social Security benefits are indexed to inflation. Last year, Social Security benefits increased by 8.7% due to high inflation in the US (OCAe). Thus, Social Security is being pressured on two fronts; it is stuck holding treasury securities at lower rates and higher inflation increases its liability payments.



Sources: SSA Historical Interest Rates, https://www.ssa.gov/OACT/ProgData/intRates.html & SSA Effective Interest Rates, https://www.ssa.gov/OACT/ProgData/effectiveRates.html

[3] Basically, in the years after the financial crisis.

Table 1: Trust Fund Investments Held type of investment type, interest rate, and trust fund As of 12/31/2022, $ Thousands			
Investment type	Rate (%)	Maturity	Total
Special Issue Bonds	0.75%	2024 - 2033	154,108,805
	0.75%	2034 - 2035	5,827,743
	1.38%	2024 - 2027	193,319,460
	1.50%	2024 - 2033	128,370,581
	1.50%	2034 - 2036	5,770,906
	1.75%	2024 - 2028	197,781,329
	1.88%	2024 - 2031	204,358,272
	2.00%	2024 - 2030	207,724,400
	2.25%	2024 - 2034	616,204,857
	2.50%	2024 - 2026	178,490,956
	2.88%	2024 - 2025	175,088,265
	2.88%	2026 - 2031	21,744,708
	2.88%	2032	3,624,119
	2.88%	2033	176,889,560
	3.00%	2024 - 2033	187,586,862
	3.00%	2034 - 2037	11,458,162
	3.25%	2024	153,311,163
Certificates of indebtedness	3.88%	2023	54,125,901
	4.00%	2023	72,467,687
	4.25%	2023	81,696,507
Total amount invested			**2,829,950,243**

In my opinion, these political limitations point to one solution: let the voters decide. Politicians are in a no-win situation when faced with tax increases or benefit reductions. By delegating the decision making to the populace, politicians can transfer away political risk to a third party. This opportunity is similar to insurers transferring interest rate risk to their policyholders with separate account designs. Inaction is becoming too costly because each year we do not either raise taxes or reduce benefits, the necessary tax hikes or benefit cuts increase. Critics may argue voters are not sophisticated enough to understand Social Security solvency. My response to this condescension is that Social Security is not rocket science. Americans will comprehend the need to either raise taxes or reduce benefits in order to improve the program's solvency. Further, voters don't need to understand every piece of the actuarial projection model to make an informed decision. Voters should be provided with options of tax increases or benefits reductions (or combinations) and they can choose their favorite option. Going back to sophistication, the inaction over the last 30 years to me, indicates a degree of unsophistication. Congress has not realized that when they ignore their financial obligations, these financial obligations

exponentially grow with time like an unpaid credit card balance. Perhaps congress can win back some trust in our democracy and institutions by shifting this responsibility to voters. A recent Gallup poll indicated that just 7% of Americans (5% of Republicans and 10% of Democrats) had confidence in Congress in 2022 (Jones, 2022). The same poll indicates declines in trust across the board for all American institutions (Jones, 2022). Empowering voters could be an initial step to reversing these trends. Social Security belongs to Americans and American voters should ultimately decide the amount of tax increases or benefits cuts implemented to preserve Social Security's future.

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