Funding Direct Payments to Americans through Social Security Deferral

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We analyze in this whitepaper a way of addressing both targeting and financing in a direct payment (or "stimulus check") program to provide households with additional liquidity during the economic downturn associated with the COVID-19 virus: by allowing voluntary loans to individuals in which the proceeds would be paid back through deferral of Social Security retirement benefits at the time when the individual claims Social Security. Specifically, those individuals that choose to receive a check would have the balance carried forward at a pre-specified, favorable government interest rate until the time that they choose to claim Social Security. At that time, the loan would be repaid out of the very first Social Security checks the individual would otherwise receive. Those who choose to receive no check would keep their Social Security retirement benefits unchanged. For most individuals, the delay that could be expected to repay a $5,000 check would be at most 3 months in order to make the program budget neutral.

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Introduction

The direct individual payments in the CARES Phase 3 federal response to the COVID-19 crisis are the latest example of Congress voting for the federal government to deliver money directly to U.S. households. Although commonly referred to as "stimulus" checks, most observers agreed that the goal of the measures was not to stimulate the economy with increased consumer spending while people were avoiding the virus, but rather provide households with the liquid resources necessary to pay their bills and meet their essential needs until the crisis passes. Under the CARES direct payment program, the vast majority of individuals who make less than $75,000 will receive $1,200. Married couples who make less than $150,000 will receive $2,400. Families with children under 17 years of age will receive additional payments of $500 per child. The phaseout will be $5 for every $100 of adjusted gross income beyond these thresholds. This program is estimated to cost some $290 billion, according to the Committee for a Responsible Federal Budget (2020).

There have been several criticisms about the plan to send checks directly to households. The first is that direct payments, like the other measures in the fiscal response, are deficit-financed. Future taxpayers will have to pay off the debts incurred by the federal government, either through direct taxation or inflation. Both the inter- and intra-generational distribution of the payoff burden is unclear. In the discussion leading up to CARES, some proposals called for the checks to be a loan that would be repaid in the following year's tax season, but this was rejected in light of the uncertainty about the duration and depth of the crisis.

The second concern is that the plan is poorly targeted. For example, households whose income consists entirely of Social Security or fixed retirement pensions do not need checks to replace their income. Individuals working for state, local, county, or federal government are

generally keeping their employment earnings, as are those who work in unaffected industries. Proponents of the direct payments argue that determining who is in need and who is not would take too long, or be inaccurate, unfair, or even distortionary. Federal action is justified to assist employees whose jobs have been terminated due to government orders to close certain businesses, such as restaurants, as these closures will inevitably cause an economic contraction. However, such a contraction cannot be addressed via conventional fiscal stimulus since no increase in consumer demand will cause restaurants closed on government orders to re-open.

Rather, the policy emphasis should be on assisting affected workers to maintain their standard of living until their employment opportunities resume. Enhanced Unemployment Insurance benefits can help in many instances, although these may have unintended consequences on labor markets. Small business owners have access to forgivable loans as part of the CARES Act, but these are limited in the business costs they can cover, and the $349 billion in funding allocated for these loans has as of mid-April 2020 already been exhausted.

For these or other reasons, some Americans may desire additional liquidity to maintain their household standard of living or keep a small business afloat until the economy recovers. But for many Americans such funds may be difficult to acquire at reasonable cost. Many Americans hold little financial wealth, and in an economic downturn ordinary forms of collateral may not be sufficient to secure a low-interest loan.

There is, however, a significant pool of household assets that can serve to collateralize loans to affected households, allowing them to borrow modest amounts at a reasonable interest rate. These assets are the $37.9 trillion in Social Security benefits that U.S. households had accrued as of 2019 but not yet received as retirement or disability benefits (Nickerson and Burkhalter,

2019. Also see Sabelhaus and Volz, 2020). Average accrued Social Security benefits, often referred to as Social Security wealth, is equal to $594,000 per household as of 2019.

Congress will likely be tempted again to vote to provide liquidity to households, either in the COVID-19 crisis or in a future crisis. We therefore analyze in this whitepaper a way of addressing both targeting and financing in a direct payments program: by making the program a voluntary loan in which the proceeds would be paid back through deferral of Social Security retirement benefits at the time when the individual claims Social Security. In essence, individuals with short-term liquidity needs could take out a loan against their future Social Security at extremely favorable rates.

Specifically, Congress could pass a plan which would offer to send all individuals not yet receiving Social Security benefits checks of a specified amount, or to offer individuals a menu of multiple amounts (say $5,000 or $10,000). The individual could also choose not to receive a check. Those that choose to receive no check would keep their Social Security retirement benefits unchanged. Those that choose to receive a check would have the balance carried forward at a pre-specified favorable government interest rate until the time that they chose to claim Social Security. At that time, the loan would be repaid out of the very first Social Security checks they would otherwise receive.[1] Practically, this means that if the loan amount plus interest is less than one month of the individual's Social Security payment when the individual claims it, the individual would receive a partial Social Security check for that first month and then would receive unreduced benefits for every future month. If the loan amount plus interest equaled more than one month's Social Security, then the receipt is delayed for the requisite number of months to repay the loan

[1] The Social Security loan is similar in some respects to the paid family leave proposal from Shapiro and Biggs (2018), though it also differs from that proposal in a number of respects.

and a partial check is issued for the final month of delay if the number of required months of delay is not a whole number.

We model the expected number of months deferral needed to repay a loan of $5,000, as function of the age and earnings level of the individual taking the loan. We focus on five stylized earnings profiles published by the Social Security Office of the Chief Actuary, and three ages: 25, 45, and 60. For all but the 45- and 60-year olds in the very lowest earnings category, and 60-year olds in the second to lowest earnings category, the expected delay to repay the $5,000 loan would be at most three months.

This plan addresses the weaknesses of blanket check grant programs. Since the plan is structured as a low-interest loan, it would allow those in need to access the funds, but not spend resources on households who do not wish to take the funds at this time. The fact that the repayment period is on average quite lengthy makes it possible to provide liquidity to households in the form of a loan without requiring repayment in the very short term. An important difference between this plan and the granting of checks is that it does not socialize the costs of repaying the checks but rather those taxpayers that take the funds are to a great extent the ones that pay it back. Interest is charged in a budget-neutral fashion recognizing that some individuals will die before reaching the Social Security retirement age – those that survive are paying the cost for those individuals through a mortality adjustment in the interest rate. This approach makes the plan budget neutral.

Deferring Social Security to Repay Loans

We assume that voluntary loans are made available to Americans who are currently under the Social Security normal retirement age. Upon the loan recipient claiming Social Security retirement or disability benefits, the delivery of benefit checks would be delayed for a time sufficient to repay the principal and interest on the loan.

The Social Security loan would not affect the ages at which an individual can file for retirement benefits. As under current law, participants could file for retirement benefits at any age beginning with age 62. However, after filing, payment of the first benefit check would be delayed by a number of months sufficient to repay the balance of the loan. Eligibility for Medicare benefits, which begins at age 65, would remain unchanged.

Individuals would opt for a Social Security loan via a form on the Social Security Administration's website. The US Treasury Department would process the loan payments, as it processes all Social Security benefit payments, and the loan amount would either be automatically deposited in the bank account used by the claimant for their last income tax return or mailed to the claimant at their postal address. The amount of the loan would in effect be drawn from the Social Security trust funds, though the funds are widely considered to be an intragovernmental accounting entry rather a source of funding from a broader budgetary or economic perspective. Nevertheless, the interest rate assigned to the Social Security loan is designed so that over time the Social Security trust funds are reimbursed for the value of the loan, plus interest. While the balance on the Social Security trust fund would decline for each loan, the present value of the liabilities would also decrease, so that the actuarial balance of the program would remain essentially unchanged.[2]

We illustrate the proposal assuming a loan amount of $5,000, but the illustrative delays in Social Security retirement benefits can be scaled upward or downward proportionally based on the figures we present.

[2] If avoiding the optics of an acceleration of the Social Security Trust Fund depletion year were desired, the Treasury could credit the Social Security Trust Fund with Treasury securities in the loan amounts and the Social Security Trust Fund could "repay" the Treasury with interest upon the individual's retirement. The fact that this is possible illustrates the accounting fiction of the Social Security Trust Fund.

The Social Security Benefit Formula

Social Security offers benefits to retired and disabled workers and their survivors. For retirees and the disabled, Social Security is designed to replace a portion of a beneficiary's prior earnings. Survivor's benefits are calculated based upon the earnings of the eligible worker on whose account the survivor's benefits are claimed.

Social Security's benefit formula is progressive, meaning that it replaces a larger percentage of prior earnings for low-earning participants than for higher earners. The Social Security benefit formula begins by calculating a measure of a worker's career-average salary, which is referred to as Average Indexed Monthly Earnings (AIME). A worker's nominal earnings in any given year are indexed to economywide earnings as of the year the worker turns age 60, which is accomplished by multiplying the nominal earnings in a given year by the ratio of the national Average Wage Index (AWI) in the year the worker turns 60 to the AWI in the year the nominal earnings took place. The AWI is the Social Security Administration's measure of the average wage paid to workers covered by Social Security in a given year. Any earnings taking place after age 60 are not indexed, but entered into the benefit formula in nominal terms.

After past earnings are indexed for wage growth to age 60, the Social Security benefit formula selects the highest 35 years of earnings (including any nominal earnings taking place after age 60). The average of those highest 35 years of earnings is then divided by 12 to produce Average Indexed Monthly Earnings (AIME).

In the next step, Social Security calculates a worker's Primary Insurance Amount (PIA) based upon their AIME. The PIA is the basic worker benefit received at the Normal Retirement Age, which for workers currently age 60 in 2020 will be 67. For a worker currently aged 60 and retiring at the normal retirement age, the Primary Insurance Amount will be equal to 90 percent of

their first $856 in Average Indexed Monthly Earnings, 32 percent of monthly earnings between $857 and $5,157, and 15 percent of earnings between $5,158 and $9,875, the maximum average monthly earnings subject to payroll taxes.[3] The dollar values assigned to each percentage replacement factor (known as "bend points") are increased annually along with average wages in the economy. While the AIME indexes pre-retirement earnings through age 60, the bend point formula is wage-indexed and frozen in place as of age 62.

The Primary Insurance Amount is adjusted based on the age at which the participant claimed benefits. Individuals claiming benefits prior to the Normal Retirement Age receive a permanent reduction in their benefits while those claiming after the Normal Retirement Age receive higher benefits for as long as they live.

In addition, a retiring individual may be eligible for a spousal benefit. The spousal benefit is equal to one half of the benefit received by the higher-earning spouse in a couple. The lower-earning spouse is eligible to receive the greater of the spousal benefit or the benefit calculated based upon their own earnings record, but not both.

For disabled workers the benefit formula is similar to the formula used to calculate retirement benefits, but the calculation of Average Indexed Monthly Earnings is adjusted to account for most disabled workers not having completed a full working career. A worker qualifying for Disability Insurance benefits has their benefit calculated as if they had claimed benefit as the Normal Retirement Age.

[3] The Social Security Administration provides bend point dollar values by year of retirement on its website. https://www.ssa.gov/oact/cola/bendpoints.html

Following the initial receipt of benefits, beneficiaries receive an annual Cost of Living Adjustment (COLA) designed to maintain the purchasing power of benefits in the face of rising prices. The COLA is paid beginning with the first check of each calendar year.

Simulating a Social Security Loan

In this section we illustrate how the Social Security loan concept might be applied. We simulate individuals of different ages and earnings levels, since both the time until repayment and the progressivity of the Social Security benefit formula can determine the required delay in claiming benefits.

We start with a set of stylized earnings patterns generated by the Social Security Administration's Office of the Chief Actuary. These so-called "scaled earners" are designed to represent typical patterns of earnings over workers' careers. Earnings begin lower, then rise as a worker gains experience, then flattens and declines as the worker nears retirement and tends to reduce their annual hours of work. The scaled earners are established at different earnings levels, described in Table 1. The "very low" wage earner generally earns about 25 percent of the national average wage. About 18.3 percent of actual retirees had career-average earnings most similar to the very low wage worker. Likewise, the medium wage worker earns about the national average wage over their career and is representative of about 29.9 percent of actual retirees. The maximum wage worker is assumed to earn the maximum salary subject to Social Security taxes in every year of their working career. For 2020, the maximum taxable wage is $137,200. Only 8.8 percent of retirees have career average earnings that are most similar to the SSA's stylized maximum wage worker.

Table 1. Descriptive Statistics for SSA Scaled Earners turning age 62 in 2017.

	Very Low	Low	Medium	High	Maximum
Career average earnings[1]	$12,549	$22,588	$50,196	$80,313	$123,232
Career average earnings as percent of Average Wage Index	25%	45%	100%	160%	--
Percent with AIME less than scaled earner level	12.0%	24.5%	56.3%	81.5%	100.0%
Percent with AIME closest to scaled earner	18.3%	22.5%	29.9%	20.4%	8.8%

Source: Clingman and Burkhalter, 2019. AIME is Average Indexed Monthly Earnings.
Note: (1) This figure represents the average of pre-retirement earnings where nominal earnings are first indexed to the growth of national average wages through age 62.

We analyze the scaled earners at every earnings level and every age from 21 through 65. Each earner type is assumed to choose an optional Social Security loan of $5,000, which they must repay via a delay in benefits once they retire or become disabled. However, because it may be years or decades before the loan is repaid, interest must be charged in order not to harm Social Security's finances.

We simulate the loans assuming that interest is charged at 1.6 percent annually. This interest rate is composed of two parts. First, the base interest rate is based on the market yield on U.S. Treasury securities with a time to maturity of 20 years, which as of April 6, 2020 was 1.1 percent.[4] However, to that base interest rate we add a surcharge designed to offset loans made to Social Security participants who die prior to the retirement age and thus do not repay the loan. According to life tables published by the Social Security Administration (2015), between ages 21

[4] For details see https://www.treasury.gov/resource-center/data-chart-center/interest-rates/pages/textview.aspx?data=yield

and 66 there is an approximately 0.5 percent annual probability of death. Increasing the annual interest rate on the Social Security loan by 0.5 percent to 1.6 percent would approximately compensate Social Security's finances for any loan participants who died prior to retirement and thus failed to repay the loan.

Further analysis is required to account for the possibility of adverse selection on the required interest rate for actuarial balance. Specifically, those who correctly believe they will die prior to retirement would be more likely to take the loan, and the final mortality adjustment to the 20-year Treasury yield would have to be somewhat higher than 50 basis points to account for this.

Were policymakers to wish the loan program as a whole to benefit Social Security's finances, the loan interest rate could be set somewhat above the rate expected to be earned by the Social Security trust funds, while noting that an increase in the loan interest rate would presumably reduce participation in the loan. Likewise, if the loan interest rate were set below the expected yield on trust fund bonds the loan would serve as a subsidy to loan participants. This would come at a cost to Social Security's financing and would likely increase participation in the loan program.

For workers of a given age, the dollar reduction in monthly Social Security benefits will be the same regardless of the earnings level of the worker, so long as we assume that workers of different earnings levels have the same life expectancy following retirement. However, at any given dollar level of loans the delay in claiming benefits will be larger for lower-earning workers because they receive lower Social Security benefits than higher earners. We assume that if the required delay is less than one month that Social Security issues a partial check for that month. Likewise, a partial check is issued for the final month of delay if less than a full month of delay is required.

To illustrate, consider a 45-year old medium wage worker who accepts a $5,000 Social Security loan in 2020 and claims benefits at the Normal Retirement Age of 67 in 2042. Assuming a 1.6 percent annual interest rate on the loan, the accumulated value of his loan at retirement age would be $7,205. His monthly benefit at the Normal Retirement Age would be $4,377. Under this approach, his first Social Security retirement check would be eliminated and his second check reduced $2,828, followed by payment of full checks in his third month and thereafter.

Table 2 illustrates the required months of delay in receiving Social Security retirement benefits to repay a $5,000 Social Security loan taken in 2020, based upon both the current age and the earnings level of eligible workers. We illustrate using workers currently aged 60, 45 and 25. For workers currently aged 60, repaying a $5,000 Social Security loan taken today would expect a required delay in claiming Social Security retirement benefits ranging from just under five months for a very low wage worker to 1.41 months for a worker who earns the maximum taxable salary each year of their career. For workers currently aged 45 the expected delays range from 3.5 months to 0.99 months, and for workers currently aged 25, expected delays range from 2.27 months to 0.65 month. The actual required delay would not be determined until the individual claimed Social Security, but the value of the loan balance and estimates of the required delay in benefits could be provided in individual's Social Security statement. These estimates would become more accurate as the participant approached claiming age.

Table 2. Expected months delay in claiming benefits to repay $5,000 Social Security loan, based upon current age and earnings level

Current age	Very low	Low	Medium	High	Max
60	4.96	3.79	2.30	1.74	1.41
45	3.50	2.67	1.62	1.22	0.99
25	2.27	1.73	1.05	0.79	0.65

Source: Authors' calculations from Social Security Administration figures. Assumes 1.6 percent annual interest rate on Social Security loan.

The reason the projected percentage reduction in benefits declines for younger workers is that the Social Security Administration projects that nominal wage growth and with it the value of future Social Security benefits will increase at a rate of about 3.9 percent each year, while the Social Security loan is offered at a nominal interest rate of 1.6 percent. Thus, while future wage growth and the growth of benefits are uncertain, and would be viewed as uncertain form the perspective of the individual decisionmaker, Social Security benefits are projected to grow faster than the balances of the Social Security loan that would need to be repaid.

Integration with Disability Insurance

A complicating issue is how to treat recipients of a Social Security loan who end up claiming Social Security Disability Insurance (DI) benefits rather than retirement benefits. Our baseline analysis assumes that individuals who claim DI benefits also accept a delay in those benefits sufficient to repay their loan. The length of the benefit delay would depend upon the number of years between taking the loan and claiming DI benefits and the rate of the participant's wage growth relative to the interest rate charged on the loan.

The treatment of disabled workers becomes more complicated under other approaches to repaying the loan. One option would exempt DI beneficiaries from repaying a Social Security loan while holding the Social Security program harmless by adjusting upward the interest rate on loans for recipients who do survive to the Normal Retirement Age. While the chances of death prior to retirement age are relatively small, a substantially larger number of workers will end up claiming Social Security DI benefits. According to the Social Security Administration's actuaries, an individual aged 20 in 2019 has a 26.2 percent chance of claiming Disability Insurance benefits (Maleh and Bosley, 2019.) Given the greater probably of pre-retirement disability compared to

death, the adjustment to the Social Security loan interest rate would be larger and make the loan more actuarially unfair contingent on surviving to the NRA.

Alternatively, percentage cuts to monthly benefits could be applied to disabled worker's benefits. The problem with that approach is that an individual's life expectancy after claiming DI benefits can vary significantly based upon the time and the cause of their disability. For instance, a worker who claims Social Security DI benefits at age 21 can be expected to survive roughly another two decades, while a worker who claims DI at age 40 has a life expectancy of only about 10 years. (Authors' estimates from Zayatz, 2015). Similarly, workers who qualify for DI benefits based upon a mental disorder or musculoskeletal pain have much longer life expectancies after claiming benefits than workers who claimed benefits based upon a circulatory or respiratory disorder. (Hennessey and Dykacz, 1993.) For these reasons, applying a monthly benefit delay to Social Security loan recipients who claim Disability Insurance benefits is the cleanest approach to repaying the loan while imposing what is likely to be only a modest delay in receiving benefit payments.

Conclusion

Viewed as an asset, the present values of the Social Security annuity that the federal government provides to individuals is one of the most important assets on the balance sheet of households A household with little financial wealth may nevertheless hold hundreds of thousands of dollars in accrued Social Security benefits. However, the private loan market does not allow households to collateralize borrowing against this source of wealth as a means of consumption smoothing. Alternative sources of credit may impose much higher interest rates. In situations when the federal government wishes to help households smooth consumption through direct payments, voluntary plans that allow households to borrow against future Social Security allow access to

borrowing against this critical source of wealth at very low interest rates. Such approaches also allow for the provision of additional household liquidity without worsening the overall finances of the federal government.

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