



SOCIAL SECURITY

MEMORANDUM

Date: November 24, 2020

Refer To: TCA

To: Andrew Saul
Commissioner

David Black
Deputy Commissioner

From: Stephen C. Goss, ASA, MAAA /s/
Chief Actuary

Karen P. Glenn, FSA, MAAA, EA /s/
Deputy Chief Actuary

Subject: Updated Baseline for Actuarial Status of the OASI and DI Trust Funds, Reflecting Pandemic and Recession Effects—**INFORMATION**

Historically, we have used the most recent Trustees Report's intermediate projection as our baseline for evaluation of legislative proposals until the next Trustees Report is issued. However, we are in an unprecedented year. The sudden arrival of the pandemic and the ensuing precipitous recession clearly are having effects on the actuarial status of the OASI and DI Trust Funds. We have been evaluating those effects, and on November 16 the Social Security Administration released publicly what is effectively an updated actuarial valuation by the Office of the Chief Actuary in the Agency Financial Report (AFR) for Fiscal Year 2020. This update accounts for the implications of the pandemic and the recession, as was required for the audit of the Statement of Social Insurance (SOSI) in the AFR. The SOSI is based on the intermediate assumptions of the 2020 Trustees Report, where neither the pandemic nor the recession were reflected. By reflecting our current best estimate of the implications of the pandemic and recession as a "subsequent event" for the SOSI in the AFR, we now have a well-developed and coherent updated baseline projection that will serve as an appropriate and reasonable basis for evaluating the effects of proposals that affect the OASI and DI Trust Funds, and particularly proposals intended to extend solvency. See pages 97 and 98 of the AFR at <https://www.ssa.gov/finance/>.

We will be using this updated baseline as an interim baseline starting now and until the issuance of the 2021 Trustees Report next year. Because we now know the effects of the pandemic and recession will be significant, we believe it would be misleading to provide estimates regarding the prospects for solvency of the trust funds for proposals now being considered without recognizing these effects.

Table 1 attached provides a comparison of the projections of the actuarial status of the combined OASI and DI Trust Funds under the intermediate assumptions of the 2020 Trustees Report and those under the updated interim assumptions. Table 2 provides a comparison of the near-term assumptions under these two baselines. The long-range assumptions (i.e., the assumptions for years after the first ten years of the projection) used for the interim baseline are the same as those used for the 2020 Trustees Report.

Attachments: Tables 1, 2

**Table 1 - OASDI Cost Rate, Income Rate, Annual Balance, and Trust Fund Ratio
2020 Trustees Report Intermediate Projection and SSA Agency Financial Report (AFR) Subsequent Event - COVID 19**

2020 Trustees Report Intermediate Projection					SSA AFR Subsequent Event - COVID 19					Change from 2020 Trustees Projection		
Expressed as a percentage of present-law taxable payroll					Expressed as a percentage of subsequent event taxable payroll					Expressed as a percentage of taxable payroll		
Year	Cost Rate	Income Rate	Annual Balance	Trust Fund Ratio 1-1-year	Cost Rate	Income Rate	Annual Balance	Trust Fund Ratio 1-1-year	Cost Rate	Income Rate	Annual Balance	
2020	13.92	13.00	-0.92	261	14.80	13.91	-0.88	262	0.88	0.91	0.03	
2021	14.05	12.90	-1.15	248	14.58	12.09	-2.50	252	0.53	-0.81	-1.35	
2022	14.25	12.93	-1.32	233	14.53	12.91	-1.62	230	0.28	-0.02	-0.30	
2023	14.43	12.94	-1.49	217	14.57	12.95	-1.62	212	0.14	0.00	-0.13	
2024	14.64	12.98	-1.67	200	14.73	12.98	-1.76	194	0.09	-0.00	-0.09	
2025	14.88	13.00	-1.88	183	14.99	13.00	-1.99	176	0.11	0.01	-0.11	
2026	15.11	13.12	-1.99	165	15.24	13.13	-2.11	157	0.13	0.01	-0.12	
2027	15.35	13.15	-2.20	148	15.48	13.15	-2.32	139	0.13	0.01	-0.12	
2028	15.58	13.19	-2.39	130	15.71	13.20	-2.51	120	0.12	0.01	-0.12	
2029	15.83	13.23	-2.61	112	15.95	13.23	-2.72	101	0.12	0.01	-0.12	
2030	16.02	13.24	-2.78	94	16.14	13.25	-2.89	82	0.11	0.01	-0.11	
2031	16.19	13.26	-2.93	76	16.29	13.26	-3.03	63	0.10	0.01	-0.10	
2032	16.33	13.27	-3.07	58	16.43	13.27	-3.16	44	0.10	0.00	-0.09	
2033	16.45	13.28	-3.17	39	16.54	13.28	-3.26	25	0.09	0.00	-0.09	
2034	16.55	13.29	-3.26	20	16.64	13.29	-3.35	6	0.09	0.00	-0.08	
2035	16.63	13.29	-3.33	1	16.71	13.30	-3.41	---	0.08	0.00	-0.08	
2036	16.69	13.30	-3.39	---	16.76	13.30	-3.46	---	0.08	0.00	-0.07	
2037	16.74	13.30	-3.43	---	16.81	13.31	-3.50	---	0.07	0.00	-0.07	
2038	16.79	13.31	-3.48	---	16.86	13.31	-3.55	---	0.08	0.00	-0.07	
2039	16.82	13.31	-3.50	---	16.89	13.32	-3.57	---	0.07	0.00	-0.07	
2040	16.85	13.32	-3.53	---	16.92	13.32	-3.60	---	0.07	0.00	-0.07	
2041	16.86	13.32	-3.54	---	16.93	13.32	-3.60	---	0.07	0.00	-0.06	
2042	16.86	13.32	-3.54	---	16.92	13.32	-3.60	---	0.06	0.00	-0.06	
2043	16.85	13.32	-3.53	---	16.91	13.32	-3.58	---	0.06	0.00	-0.05	
2044	16.83	13.32	-3.51	---	16.88	13.32	-3.56	---	0.04	0.00	-0.04	
2045	16.82	13.32	-3.50	---	16.85	13.32	-3.53	---	0.03	0.00	-0.03	
2046	16.80	13.32	-3.48	---	16.83	13.32	-3.51	---	0.03	0.00	-0.03	
2047	16.79	13.32	-3.47	---	16.82	13.32	-3.50	---	0.03	0.00	-0.03	
2048	16.79	13.32	-3.47	---	16.81	13.32	-3.49	---	0.02	0.00	-0.02	
2049	16.78	13.32	-3.46	---	16.80	13.32	-3.48	---	0.02	0.00	-0.02	
2050	16.79	13.32	-3.46	---	16.80	13.32	-3.48	---	0.01	0.00	-0.01	
2051	16.79	13.32	-3.47	---	16.80	13.32	-3.48	---	0.01	0.00	-0.01	
2052	16.81	13.33	-3.48	---	16.82	13.33	-3.49	---	0.01	0.00	-0.01	
2053	16.83	13.33	-3.50	---	16.84	13.33	-3.51	---	0.01	0.00	-0.01	
2054	16.86	13.33	-3.53	---	16.87	13.33	-3.53	---	0.01	0.00	-0.01	
2055	16.89	13.33	-3.56	---	16.90	13.33	-3.56	---	0.00	0.00	-0.00	
2056	16.93	13.34	-3.59	---	16.93	13.34	-3.60	---	0.00	-0.00	-0.00	
2057	16.98	13.34	-3.63	---	16.98	13.34	-3.64	---	0.00	-0.00	-0.00	
2058	17.03	13.35	-3.68	---	17.03	13.35	-3.68	---	0.00	-0.00	-0.00	
2059	17.08	13.35	-3.73	---	17.09	13.35	-3.73	---	0.00	-0.00	-0.00	
2060	17.14	13.36	-3.79	---	17.15	13.36	-3.79	---	0.00	-0.00	-0.00	
2061	17.20	13.36	-3.84	---	17.21	13.36	-3.84	---	0.00	-0.00	-0.00	
2062	17.27	13.37	-3.90	---	17.27	13.37	-3.90	---	0.00	-0.00	-0.00	
2063	17.33	13.37	-3.96	---	17.33	13.37	-3.96	---	0.00	-0.00	-0.00	
2064	17.39	13.38	-4.02	---	17.39	13.38	-4.02	---	0.00	-0.00	-0.00	
2065	17.46	13.38	-4.08	---	17.46	13.38	-4.08	---	0.00	-0.00	-0.00	
2066	17.52	13.39	-4.14	---	17.53	13.39	-4.14	---	0.00	-0.00	-0.00	
2067	17.59	13.39	-4.20	---	17.60	13.39	-4.21	---	0.00	0.00	-0.00	
2068	17.66	13.40	-4.27	---	17.67	13.40	-4.27	---	0.00	0.00	-0.00	
2069	17.73	13.40	-4.33	---	17.74	13.40	-4.34	---	0.00	0.00	-0.00	
2070	17.80	13.41	-4.40	---	17.81	13.41	-4.40	---	0.00	0.00	-0.00	
2071	17.87	13.41	-4.46	---	17.88	13.41	-4.46	---	0.01	0.00	-0.00	
2072	17.93	13.41	-4.51	---	17.93	13.41	-4.52	---	0.00	0.00	-0.00	
2073	17.98	13.42	-4.57	---	17.99	13.42	-4.57	---	0.00	0.00	-0.00	
2074	18.04	13.42	-4.61	---	18.04	13.42	-4.62	---	0.01	0.00	-0.01	
2075	18.08	13.43	-4.65	---	18.09	13.43	-4.66	---	0.01	0.00	-0.01	
2076	18.11	13.43	-4.68	---	18.12	13.43	-4.69	---	0.01	0.00	-0.01	
2077	18.14	13.43	-4.71	---	18.14	13.43	-4.71	---	0.00	0.00	-0.00	
2078	18.15	13.43	-4.72	---	18.16	13.43	-4.72	---	0.00	0.00	-0.00	
2079	18.15	13.43	-4.72	---	18.15	13.43	-4.72	---	0.00	0.00	-0.00	
2080	18.14	13.43	-4.70	---	18.14	13.43	-4.71	---	0.00	0.00	-0.00	
2081	18.12	13.43	-4.69	---	18.12	13.43	-4.69	---	0.00	0.00	-0.00	
2082	18.09	13.43	-4.66	---	18.10	13.43	-4.66	---	0.00	0.00	-0.00	
2083	18.07	13.43	-4.64	---	18.06	13.43	-4.63	---	-0.00	-0.00	0.00	
2084	18.03	13.43	-4.60	---	18.02	13.43	-4.59	---	-0.01	-0.00	0.01	
2085	18.00	13.43	-4.57	---	17.98	13.43	-4.55	---	-0.02	-0.00	0.02	
2086	17.96	13.42	-4.53	---	17.94	13.42	-4.52	---	-0.02	-0.00	0.02	
2087	17.92	13.42	-4.50	---	17.90	13.42	-4.48	---	-0.02	-0.00	0.02	
2088	17.90	13.42	-4.48	---	17.87	13.42	-4.45	---	-0.02	-0.00	0.02	
2089	17.88	13.42	-4.46	---	17.84	13.42	-4.43	---	-0.03	-0.00	0.03	
2090	17.87	13.42	-4.45	---	17.83	13.41	-4.42	---	-0.03	-0.00	0.03	
2091	17.87	13.42	-4.45	---	17.84	13.42	-4.42	---	-0.03	-0.00	0.03	
2092	17.88	13.42	-4.46	---	17.85	13.42	-4.44	---	-0.03	-0.00	0.02	
2093	17.90	13.42	-4.48	---	17.88	13.42	-4.47	---	-0.02	-0.00	0.02	
2094	17.94	13.42	-4.51	---	17.92	13.42	-4.50	---	-0.01	-0.00	0.01	
2095	17.97	13.42	-4.55	---	17.96	13.42	-4.54	---	-0.01	-0.00	0.01	

Summarized Rates 2020-2094: OASDI				
Cost Rate	Income Rate	Actuarial Balance	Year of Reserve Depletion	
17.06%	13.85%	-3.21%	2035	

Summarized Rates 2020-2094: OASDI				
Cost Rate	Income Rate	Actuarial Balance	Year of Reserve Depletion	
17.13%	13.85%	-3.28%	2034	

Summarized Rates 2020-2094: OASDI			
Change in Cost Rate	Change in Income Rate	Change in Actuarial Balance	
0.07%	-0.00%	-0.07%	

Table 2 - Assumptions Used for Updated OASDI Baseline: Subsequent Event Analysis in the FY 2020 SSA Agency Financial Report

Assumption/measure	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Fertility (TFR)										
2020 TR	1.69	1.70	1.73	1.77	1.82	1.87	1.91	1.93	1.94	1.95
Subsequent event	<u>1.69</u>	<u>1.57</u>	<u>1.66</u>	<u>1.83</u>	<u>1.88</u>	<u>1.93</u>	<u>1.91</u>	<u>1.93</u>	<u>1.94</u>	<u>1.95</u>
Difference	0.00	-0.13	-0.07	0.06	0.06	0.06	0.00	0.00	0.00	0.00
Mortality (age-sex-adjusted central death rate)										
2020 TR	790.4	784.9	779.2	773.2	767.1	760.9	754.6	748.3	742.0	735.7
Subsequent event	<u>885.2</u>	<u>832.0</u>	<u>794.8</u>	<u>773.2</u>	<u>767.1</u>	<u>760.9</u>	<u>754.6</u>	<u>748.3</u>	<u>742.0</u>	<u>735.7</u>
Difference	94.8	47.1	15.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net LPR immigration (levels in thousands)										
2020 TR	788	788	788	788	788	788	788	788	788	788
Subsequent event	<u>428</u>	<u>428</u>	<u>1,028</u>	<u>1,028</u>	<u>1,028</u>	<u>788</u>	<u>788</u>	<u>788</u>	<u>788</u>	<u>788</u>
Difference	-360	-360	240	240	240	0	0	0	0	0
Net other-than-LPR immigration (levels in thousands)										
2020 TR	631	614	597	586	576	567	561	555	549	544
Subsequent event	<u>-449</u>	<u>-442</u>	<u>1,366</u>	<u>1,339</u>	<u>1,312</u>	<u>564</u>	<u>552</u>	<u>543</u>	<u>541</u>	<u>540</u>
Difference	-1,080	-1,056	769	753	736	-3	-9	-12	-8	-4
Disability incidence (age-sex-adjusted rate per thousand exposed)										
2020 TR	4.34	4.18	4.25	4.53	4.77	4.80	4.87	4.92	4.96	4.99
Subsequent event	<u>3.87</u>	<u>4.52</u>	<u>4.53</u>	<u>4.57</u>	<u>4.70</u>	<u>4.81</u>	<u>4.88</u>	<u>4.93</u>	<u>4.97</u>	<u>5.00</u>
Difference	-0.47	0.34	0.28	0.04	-0.07	0.01	0.01	0.01	0.01	0.01
Disability termination (age-sex-adjusted rate per thousand beneficiaries)										
2020 TR	41.31	39.16	38.56	38.04	37.51	36.90	36.25	35.54	34.77	33.95
Subsequent event	<u>42.79</u>	<u>40.64</u>	<u>39.05</u>	<u>38.04</u>	<u>37.51</u>	<u>36.90</u>	<u>36.25</u>	<u>35.54</u>	<u>34.77</u>	<u>33.95</u>
Difference	1.48	1.48	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Productivity, total US economy (annual percentage change)										
2020 TR	1.26	1.99	1.86	1.67	1.62	1.63	1.63	1.63	1.63	1.63
Subsequent event	<u>3.20</u>	<u>1.77</u>	<u>0.76</u>	<u>0.67</u>	<u>1.22</u>	<u>1.46</u>	<u>1.63</u>	<u>1.64</u>	<u>1.64</u>	<u>1.63</u>
Difference	1.94	-0.22	-1.10	-1.00	-0.40	-0.17	0.00	0.01	0.01	0.00
Average wage in covered employment (annual percentage change)										
2020 TR	3.50	4.44	4.09	3.83	3.78	3.81	3.84	3.89	3.89	3.72
Subsequent event	<u>-4.33</u>	<u>8.23</u>	<u>5.99</u>	<u>3.17</u>	<u>3.45</u>	<u>3.66</u>	<u>3.83</u>	<u>3.89</u>	<u>3.89</u>	<u>3.71</u>
Difference	-7.83	3.79	1.90	-0.66	-0.33	-0.15	-0.01	0.00	0.00	-0.01
CPI-W (annual percentage change)										
2020 TR	2.27	2.43	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40
Subsequent event	<u>1.23</u>	<u>1.65</u>	<u>2.05</u>	<u>2.36</u>	<u>2.40</u>	<u>2.40</u>	<u>2.40</u>	<u>2.40</u>	<u>2.40</u>	<u>2.40</u>
Difference	-1.04	-0.78	-0.35	-0.04	0.00	0.00	0.00	0.00	0.00	0.00
Real-wage differential (percent)										
2020 TR	1.23	2.01	1.69	1.43	1.38	1.41	1.44	1.49	1.49	1.32
Subsequent event	<u>-5.56</u>	<u>6.58</u>	<u>3.93</u>	<u>0.80</u>	<u>1.05</u>	<u>1.26</u>	<u>1.43</u>	<u>1.49</u>	<u>1.49</u>	<u>1.31</u>
Difference	-6.79	4.57	2.24	-0.63	-0.33	-0.15	-0.01	0.00	0.00	-0.01
Unemployment rate (percent)										
2020 TR	3.8	4.2	4.6	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Subsequent event	<u>8.3</u>	<u>6.5</u>	<u>5.2</u>	<u>5.0</u>	<u>5.0</u>	<u>5.0</u>	<u>5.0</u>	<u>5.0</u>	<u>5.0</u>	<u>5.0</u>
Difference	4.5	2.3	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total employment, military and civilian (annual percentage change)										
2020 TR	0.9	0.3	0.3	0.4	0.6	0.5	0.5	0.5	0.5	0.5
Subsequent event	<u>-6.4</u>	<u>3.0</u>	<u>3.2</u>	<u>2.0</u>	<u>1.0</u>	<u>0.7</u>	<u>0.5</u>	<u>0.5</u>	<u>0.5</u>	<u>0.5</u>
Difference	-7.3	2.7	2.9	1.6	0.4	0.2	0.0	0.0	0.0	0.0
Real GDP (annual percentage change)										
2020 TR	2.1	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Subsequent event	<u>-3.5</u>	<u>4.7</u>	<u>3.9</u>	<u>2.7</u>	<u>2.1</u>	<u>2.1</u>	<u>2.1</u>	<u>2.1</u>	<u>2.1</u>	<u>2.1</u>
Difference	-5.6	2.4	1.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0
Trust fund new-issue real interest rate (percent)										
2020 TR	0.0	-0.1	0.5	0.9	1.2	1.6	1.8	2.0	2.2	2.2
Subsequent event	<u>1.0</u>	<u>-0.6</u>	<u>-0.8</u>	<u>-0.7</u>	<u>-0.2</u>	<u>0.4</u>	<u>1.1</u>	<u>1.8</u>	<u>2.2</u>	<u>2.2</u>
Difference	1.0	-0.5	-1.3	-1.6	-1.4	-1.2	-0.7	-0.2	0.0	0.0
Average wage index										
2020 TR	55,641.66	58,112.16	60,499.07	62,823.60	65,207.33	67,697.32	70,300.71	73,036.06	75,872.79	78,696.64
Percent change from prior year	3.51	4.44	4.11	3.84	3.79	3.82	3.85	3.89	3.88	3.72
Subsequent event	51,603.14	55,788.36	59,076.46	60,918.68	62,996.21	65,290.06	67,793.61	70,434.27	73,176.68	75,897.91
Percent change from prior year	-4.01	8.11	5.89	3.12	3.41	3.64	3.83	3.90	3.89	3.72