

# Affect of Increasing Wage Base

(Removing the Cap)

By

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There have been proposals for raising the cap or removing the cap to which Social Security taxes are applied, similar to Medicare's tax of 2.9% on all wages. The objective is to raise revenues and many believe this will solve Social Security's financial problems. The purpose of this analysis is to identify what the consequences are if the wage base is increased.

## **Background**

The current SS-OASI benefit formula is based on wages earned subjected to the Social Security base and not taxes paid. You can see an example of the formula in practice at <http://www.ssa.gov/OACT/COLA/Benefits.html>

The current formula uses two bend points to divide the individual's average indexed wage. Three separate replacement rates are then applied to these divided ranges. Average monthly wages up to the first bend point are replaced at 90 cents on the dollar. Average monthly wages between the first and second bend point are replaced at 32 cents on the dollar while all wages above the second bend point are replaced at 15 cents on the dollar. Bend points are indexed yearly based on the change in the United States Average Wage.

What we are interested in is the additional benefits paid based on an increase in the base beyond that legislated under current law. Any additional dollars subjected to the base will increase the average indexed wage. This increase will affect those who have wages that are not currently subjected to the Social Security tax.

## **Affect on the SS-OASI benefit**

Let us assume the base is increased by \$12,000. Social Security OASI will receive 10.6% or \$1,272 more in revenue. This \$12,000 will increase the Average indexed wage by \$28.57 per month. This additional monthly indexed wage of \$28.57 will be replaced at 15 cents on the dollar. The increase in a worker's benefit will be \$4.30 more per month or \$51 per year.

Because the 15% replacement rate is flat, every dollar subjected to the increased Social Security base will have the same effect. The only exponential variable involved is time. The trust fund will earn interest on a yearly basis and compounded yearly.

If the change was made when the person was age 64, they will pay \$1,272 in total for a yearly benefit of about \$51.40. What is the net revenue increase to Social Security?

Based on the gradient formula, one can calculate the present value of the funds needed to pay this \$51.40 per year increased by inflation.

<http://www.justsayno.50megs.com/retire.html> or use the interactive program

[http://www.justsayno.5megs.com/java\\_retire\\_1.html](http://www.justsayno.5megs.com/java_retire_1.html)

Assuming a 5.5% US Treasury rate<sup>1</sup>, the present value of this increase in SS-OASI benefit is \$811.19. Therefore, of the \$1,272 collected from the worker, \$811.19 needs to be set aside now to pay the increased workers benefit over the next 20 years. The net revenue increase from this worker was \$460.81. In terms of percentages, SS-OASI gets to use 37% of the increase in revenue towards filling the shortfall, but must set aside 63% towards the future payment of benefits; otherwise, you have robbed Peter to pay Paul.

Currently 85% of all wages<sup>2</sup> are subjected to the Social Security Base of \$90,000. Eliminating the cap and subjecting all wages to the full 10.6% SS-OASI tax would increase revenues by 15%. However, 63% of this additional revenue would be needed to pay the increased promised benefits to these affected workers. This would leave just 37% of the 15% additional increase for solving the Social Security problem. The net increase in SS-OASI revenues would be 5%.

The projected shortfall in 2041 is 27% and increases to 40% sometime after 2060. Therefore, eliminating the cap would solve about 12% of Social Security's long-term revenue shortfall.

The amount of additional revenue diverted to SS-OASI increases as the worker has additional years of wages subjected to the base. The net affect for Social Security after accounting for higher SS-OASI benefits for a worker who has five years of affected wages is a modest 6% increase.

The maximum percent increase in revenues is 9%. However, not all high wage earners start out earning the maximum for 40 years. As the table shows, the fewer number of years a worker's wages are subjected to the increased base, the less excess collected to fill the shortfall. Most likely the average number years would be about twenty in, which case we are looking at 47 cents on every dollar of taxes that could be used to fill the shortfall. Eliminating the Cap could raise about 7 to 8% additional revenues.

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1 Nominal Interest Rates paid to SS-OASI <http://www.ssa.gov/OACT/ProgData/newIssueRates.html>  
Effective Interest Rates paid to SS-OASI <http://www.ssa.gov/OACT/ProgData/effectiveRates.html>  
Effective Interest Rates paid 1937 to present <http://www.ssa.gov/OACT/ProgData/effectiveRts1940-79.html>  
Monthly Interest Rates, 1937-89 <http://www.ssa.gov/OACT/ProgData/interestrates1937-89.html>  
2 Table 1.--Individual Income Tax, All Returns: Sources of Income and Adjustments, by Size of Adjusted Gross Income, Tax Year 2002 <http://www.irs.gov/pub/irs-soi/02in01ia.xls>  
SS-OASI Revenues by type and Year <http://www.ssa.gov/OACT/STATS/t4a1Income.html>

**Table 1**  
**Net Revenue Increase From Raising Base**  
**Dependent on Number of Years Worth of Wages Affected**

Working Years	Net Increase in Base	Increase in SS_OASI Benefit per month	Increase in SS-OASI Benefit (yearly)	Percent needed to fund Future Benefit	Percent of increase diverted to Fund	Present Value of Benefit	Rate of Savings Needed to fund Increase Benefit
1	\$12,000	\$4.29	\$51.43	63%	37%	\$811.19	\$807.27
2	\$12,000	\$8.57	\$102.86	63%	37%	\$1,679.16	\$799.55
3	\$12,000	\$12.86	\$154.29	62%	38%	\$2,606.90	\$791.87
4	\$12,000	\$17.14	\$205.71	62%	38%	\$3,597.52	\$784.24
5	\$12,000	\$21.43	\$257.14	61%	39%	\$4,654.29	\$776.67
6	\$12,000	\$25.71	\$308.57	60%	40%	\$5,780.63	\$769.14
7	\$12,000	\$30.00	\$360.00	60%	40%	\$6,980.11	\$761.67
8	\$12,000	\$34.29	\$411.43	59%	41%	\$8,256.47	\$754.24
9	\$12,000	\$38.57	\$462.86	59%	41%	\$9,613.63	\$746.86
10	\$12,000	\$42.86	\$514.29	58%	42%	\$11,055.68	\$739.53
11	\$12,000	\$47.14	\$565.71	58%	42%	\$12,586.89	\$732.26
12	\$12,000	\$51.43	\$617.14	57%	43%	\$14,211.74	\$725.03
13	\$12,000	\$55.71	\$668.57	56%	44%	\$15,934.92	\$717.85
14	\$12,000	\$60.00	\$720.00	56%	44%	\$17,761.30	\$710.72
15	\$12,000	\$64.29	\$771.43	55%	45%	\$19,696.02	\$703.64
16	\$12,000	\$68.57	\$822.86	55%	45%	\$21,744.40	\$696.61
17	\$12,000	\$72.86	\$874.29	54%	46%	\$23,912.05	\$689.63
18	\$12,000	\$77.14	\$925.71	54%	46%	\$26,204.79	\$682.70
19	\$12,000	\$81.43	\$977.14	53%	47%	\$28,628.73	\$675.81
20	\$12,000	\$85.71	\$1,028.57	53%	47%	\$31,190.25	\$668.98
21	\$12,000	\$90.00	\$1,080.00	52%	48%	\$33,896.00	\$662.19
22	\$12,000	\$94.29	\$1,131.43	52%	48%	\$36,752.95	\$655.46
23	\$12,000	\$98.57	\$1,182.86	51%	49%	\$39,768.37	\$648.77
24	\$12,000	\$102.86	\$1,234.29	50%	50%	\$42,949.84	\$642.13
25	\$12,000	\$107.14	\$1,285.71	50%	50%	\$46,305.29	\$635.54
26	\$12,000	\$111.43	\$1,337.14	49%	51%	\$49,843.02	\$629.00
27	\$12,000	\$115.71	\$1,388.57	49%	51%	\$53,571.66	\$622.51
28	\$12,000	\$120.00	\$1,440.00	48%	52%	\$57,500.24	\$616.07
29	\$12,000	\$124.29	\$1,491.43	48%	52%	\$61,638.21	\$609.67
30	\$12,000	\$128.57	\$1,542.86	47%	53%	\$65,995.39	\$603.32
31	\$12,000	\$132.86	\$1,594.29	47%	53%	\$70,582.07	\$597.02
32	\$12,000	\$137.14	\$1,645.71	46%	54%	\$75,408.98	\$590.77
33	\$12,000	\$141.43	\$1,697.14	46%	54%	\$80,487.30	\$584.57
34	\$12,000	\$145.71	\$1,748.57	45%	55%	\$85,828.73	\$578.42
35	\$12,000	\$150.00	\$1,800.00	45%	55%	\$91,445.46	\$572.31
36	\$12,000	\$150.00	\$1,800.00	43%	57%	\$94,646.05	\$550.52
37	\$12,000	\$150.00	\$1,800.00	42%	58%	\$97,958.66	\$529.95
38	\$12,000	\$150.00	\$1,800.00	40%	60%	\$101,387.22	\$510.51
39	\$12,000	\$150.00	\$1,800.00	39%	61%	\$104,935.77	\$492.11
40	\$12,000	\$150.00	\$1,800.00	37%	63%	\$108,608.52	\$474.67