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PROJECTED DEMISE OF THE SPECIAL MINIMUM PIA

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Background

The Primary Insurance Amount (PIA) is the amount that a primary beneficiary (that is, a worker) receives when he or she becomes entitled to Social Security benefits at Normal Retirement Age. The benefits of the worker's auxiliaries or survivors are also based on specified percentages of the PIA. There are several formulas for determining the PIA, but for most beneficiaries it is determined under a wage-indexed formula (described later) if the worker attained age 62, became disabled or died after 1978.

The special minimum PIA is an alternative to the wage-indexed PIA created to give people with low earnings over a long working lifetime, along with their auxiliaries and survivors, higher monthly Social Security benefits than would be generated by the wage-indexed formula. In this note, we investigate how much gain over the wage-indexed PIA a beneficiary can possibly receive from the special minimum PIA. We also present data on current recipients of the special minimum.

The Special Minimum PIA

The special minimum PIA for a worker is a function of the number of *years of coverage*, n, before the year of entitlement and after 1936 in which a specific amount of earnings are credited. The years of coverage are determined as follows:

(a) Prior to 1951—one year of coverage for each $900 of aggregate earnings, not to exceed 14.

(b) After 1950 through 1978—one year of coverage for any year with earnings no less than 25% of the contribution and benefit base for that year.

(c) After 1978 through 1990—one year of coverage for any year with earnings no less than 25% of what the contribution and benefit base would have been for that year had the 1977 Social Security Amendments not been enacted (in other words, 25% of the "old-law" contribution and benefit base).

(d) After 1990 to present—one year of coverage for any year with earnings no less than 15% of the "old-law" contribution and benefit base for that year.

From this, we can infer that if a worker has no earnings prior to 1951, then the number of years of coverage, n, is the number of years in which the earnings of the worker equal or exceed a specified amount, m_j, for given year j.

When $n \le 10$, the special minimum PIA is zero; otherwise, it is equal to a specific base value, b, times the minimum of {20, n-10}, times the product of the cost-of-living adjustments (COLAs), based on increases in prices, from the year 1979 (if applicable). The specific base value, b, is determined by the date of entitlement:

(a) For dates of entitlement from January 1973 through February 1974, b = $8.50.

(b) For dates of entitlement from March 1974 through December 1978, b = $9.00.

(c) For dates of entitlement in 1979 or later, b = $11.50.

For the years 1979 to 1981, after each COLA is applied the product is rounded up to the next dime. Beginning in 1982, after each COLA is applied the product is rounded down to the next dime.

The Wage-Indexed PIA

For a worker born in or after 1930 who lives to attain age 62 (his year of first eligibility for a retirement benefit), the wage-indexed PIA is a function of the total of his 35 highest indexed annual earnings. The total of the indexed annual earnings from these 35 years is converted to a monthly average by dividing by 420 (=12×35) and then rounding down to the next dollar. This amount is called the Average Indexed Monthly Earnings (AIME). The wage-indexed PIA at age 62 is then calculated by rounding down to the next dime the sum of:

(a) 90 percent of the first b_1 dollars of the AIME, plus

(b) 32 percent of the AIME over b_1 dollars and through b_2 dollars, plus

(c) 15 percent of the AIME over b_2 dollars,

where b_1 and b_2 are the two *bend points* for the appropriate year of first eligibility. Beginning in the year of attainment of age 62, the wage-indexed PIA is increased by applying COLAs each December.

The Maximum Gain of the Special Minimum PIA Over the Wage-Indexed PIA

Consider a person born in 1938 who is first eligible for benefits in 2000 with no earnings before 1960, the year of attainment of age 22. We want to find the maximum possible gain that he can obtain if his PIA is the special minimum PIA, rather than the wage-indexed PIA. This problem can be thought of as the optimization problem:

> *Maximize* **{SPMIN – PIA}** *over all possible earnings histories,*

where we denote by SPMIN the special minimum PIA and we denote by PIA the regular wage-indexed PIA.

We can show that the solution to this problem must consist of a payment history in which the earnings in any of the 35 years of highest indexed earnings which is a year of coverage do not exceed the minimum amount in that year required for a year of coverage. To show this, assume that we have a solution to the stated maximization problem, i.e. an earnings history which maximizes the difference {SPMIN – PIA}. Let us further assume that in this earnings history there is a year of coverage, j, which is one of the 35 highest indexed annual earnings years and in which the earnings exceed m_j. If this is the case, we can construct an earnings history identical to the earnings history of that solution except that the earnings for year j equal m_j. For this modified earnings history, SPMIN will stay the same but the AIME, and hence the PIA, will decrease, so the difference {SPMIN – PIA} will increase. This contradicts our assumption that our original solution maximizes that difference. Therefore, for an earnings history to maximize the difference {SPMIN – PIA}, earnings in any of the 35 highest indexed earnings years which is a year of coverage, must not exceed m_j.

Using a similar argument, we can also show that:

(a) the solution to this problem must consist of an earnings history in which the earnings in the 35 years of highest indexed earnings which are not years of coverage equal zero; and

(b) the number of years of coverage in the solution will not exceed 30.

Combining these results, we see that the 40 earnings amounts in the earnings history (from the year of attainment of age 22 through the year of attainment of age 61) that solve our maximization problem must either be m_j or 0, and the number of years that have earnings m_j is no less than 11 and no more than 30. Now, for each n = 11,…, 30, the amount of the special minimum PIA does not depend on which of the n years among the 40 are the years with earnings of m_j, but the amount of the wage-indexed PIA does. In fact, the wage-indexed PIA will be smallest when the n years are those with the n smallest values of M_j, where M_j denotes the wage-indexed value of m_j. So to find a solution to our problem, we only need to consider 20 possible solutions, namely the earnings histories consisting of m_j for each year j with one of the n smallest values of M_j and zero for all other years. Once we find the maximum gain from the special minimum PIA among these 20 possible solutions, we obtain our answer.

Computational Results

Using the projected values for average wages, COLAs, bend points, and minimum amounts required for a year of coverage based on the 2000 Trustees Report intermediate assumptions, we found a solution to the stated problem by evaluating all potential special earnings histories described above. In addition, we solved the corresponding problem for persons born in the years 1939 to 1951 and correspondingly first eligible for benefits from 2001 to 2013. The following table presents these results—the special minimum PIA, the wage-indexed PIA, and the advantage of the special minimum for the earnings histories that solve the optimization problem for the years of first eligibility 2000 to 2013:

Table 1.—PIAs Based on Earnings Histories Which Optimize the Effect of the Special Minimum PIA Computation for Workers in Year of First Eligibility, 2000-13

Year of first eligibility	Special minimum PIA	Wage-indexed PIA	Difference between special minimum and wage-indexed PIA
2000	$580.60	$519.10	$61.50
2001	598.50	544.70	53.80
2002	616.40	568.80	47.60
2003	634.80	593.50	41.30
2004	654.40	617.90	36.50
2005	675.30	643.50	31.80
2006	697.50	669.50	28.00
2007	720.50	695.90	24.60
2008	744.20	723.90	20.30
2009	768.70	752.00	16.70
2010	794.00	781.20	12.80
2011	820.20	812.70	7.50
2012	847.20	847.00	.20
2013	875.10	881.30	-6.20

As one can observe from the projected values shown in table 1, based on the Trustees Report assumptions, it will be impossible for anyone with a year of first eligibility of 2013 to receive the special minimum. The reason for the decrease over time of the maximum gain from the special minimum PIA relative to the wage-indexed PIA is that the special minimum increases from one cohort to the next with COLAs while the wage-indexed PIA increases from one cohort to the next with wage growth and prices have generally grown more slowly than wages in the past, and are projected to continue to do so under the Trustees' assumptions.

For the person born in 1938, table 2 displays, in order by the value of M_j, the rank, n, of M_j, the calendar year j, the value of m_j, the value of M_j, and the maximum gain of the special minimum given n years of coverage:

Table 2.—Maximal Effect of the Special Minimum PIA Computation for a Worker Born in 1938 and Retiring at Age 62 in 2000

n	Year of earnings j	Amount required for year of coverage m_j	m_j indexed by average wages M_j	Maximum gain given n years of coverage
1	1965	$1,200.00	$7,434.17	N/A
2	1964	1,200.00	7,568.03	N/A
3	1998	7,605.00	7,605.00	N/A
4	1997	7,290.00	7,671.55	N/A
5	1996	6,975.00	7,768.36	N/A
6	1992	6,210.00	7,814.53	N/A
7	1991	5,940.00	7,859.90	N/A
8	1963	1,200.00	7,877.32	N/A
9	1995	6,795.00	7,938.00	N/A
10	1993	6,435.00	8,028.62	N/A
11	1999	8,055.00	8,055.00	-$154.20
12	1962	1,200.00	8,070.50	-143.30
13	1994	6,750.00	8,201.51	-131.10
14	1961	1,200.00	8,474.62	-120.30
15	1960	1,200.00	8,643.05	-110.20
16	1971	1,950.00	8,662.32	-99.10
17	1970	1,950.00	9,097.58	-89.80
18	1972	2,250.00	9,102.90	-80.50
19	1967	1,650.00	9,134.35	-71.30
20	1969	1,950.00	9,549.05	-62.20
21	1966	1,650.00	9,643.16	-53.50
22	1968	1,950.00	10,100.90	-46.30
23	1973	2,700.00	10,280.24	-39.50
24	1981	5,550.00	11,629.99	-34.70
25	1980	5,100.00	11,762.80	-30.90
26	1975	3,525.00	11,787.45	-18.40
27	1974	3,300.00	11,859.74	1.60
28	1979	4,725.00	11,879.51	21.60
29	1976	3,825.00	11,965.02	41.30
30	1982	6,075.00	12,065.87	61.50

We see from table 2 that the minimum number of years of coverage in order to receive the special minimum upon attainment of age 62 in the year 2000 is 27. Additional analysis showed that this number increased to 28 for attainments in 2001, to 29 for attainments in 2003, and to 30 for attainments in 2008.

Furthermore, we can see that the gain from the special minimum is greatest when the number of years of coverage, n, equals 30. Again, additional analysis showed that for the years from 2001 to 2012, the gain of the special minimum was also greatest when n equals 30.

Recipients of the Special Minimum PIA Benefit

The Master Beneficiary Record (MBR) is the administrative file of records of benefit entitlement. We obtained information from a one percent sample file of the MBR regarding the beneficiaries who are receiving the special minimum PIA in July 2000, including the amount of the “support PIA”—the PIA which would have been used if not for the special minimum. For most of the beneficiaries in the sample, we calculated the gain due to the special minimum PIA as:

$$GAIN = MBA - \left(\frac{SUPPIA}{SPMIN}\right) MBA$$

where SUPPIA is the support PIA and MBA is the Monthly Benefit Amount (MBA). (The MBA may be less than or greater than the PIA because the beneficiaries may have retired earlier or later than the Normal Retirement Age.)

Some beneficiaries are entitled to both a primary and secondary benefit. For dually-entitled beneficiaries whose secondary benefit is based on a special minimum PIA, we modified the formula to:

$$GAIN = MBA - MAX\ \{\left(\frac{SUPPIA}{SPMIN}\right) MBA,\ SAMBA\}$$

to recognize the possibility that the secondary benefit based on the support PIA might be smaller than the primary benefit, SAMBA.

The following table shows the number of beneficiaries in our sample and the average gain due to the special minimum PIA by year of current entitlement and beneficiary type. No disabled workers received the special minimum. We have not included beneficiaries who are receiving a primary benefit based on the special minimum but are dually entitled to a larger secondary benefit, and hence are not really gaining from the special minimum calculation.

Table 3.—Number of Beneficiaries (in the Sample) and Average Gain in Monthly Benefit Amount Due to the Special Minimum PIA by Year of Current Entitlement and Beneficiary Type

	Retired worker		Spouse		Child		Widow		All beneficiary types	
Year	Number of beneficiaries	Average gain	Number of beneficiaries	Average gain	Number of beneficiaries	Average gain	Number of beneficiaries	Average gain	Number of beneficiaries	Average gain
1965-1969	6	$27.57	0	N/A	0	N/A	1	$51.20	7	$30.95
1970-1974	25	21.40	0	N/A	0	N/A	6	29.93	31	23.05
1975-1979	44	30.81	1	$1.25	1	$33.97	8	16.30	54	28.17
1980-1984	217	34.36	10	15.80	3	77.67	17	23.58	247	33.39
1985-1989	347	32.36	25	13.22	9	23.23	25	25.82	406	30.58
1990-1994	143	27.40	24	13.33	2	4.80	40	25.20	209	25.15
1995-2000	22	28.10	10	8.97	2	22.05	49	25.38	83	24.04
Total	804	31.44	70	12.85	17	31.16	146	25.06	1,037	29.28

We see that the number of entitlements has dropped in recent years, while the average gain of the special minimum over the support PIA for all beneficiary types combined has been decreasing since the 1980-1984 period.

The following table provides information on the eligibility year of the primary beneficiary and the basis for the support PIA for families receiving the special minimum PIA:

Table 4.—Number of Families (in the Sample) Receiving the Special Minimum PIA, by the Eligibility Year of the Worker and the Basis for the Support PIA

Year of worker's eligibility	Basis for the support PIA: Average monthly wage (Eligibility before 1979)	Average indexed monthly earnings (AIME)	AIME with windfall elimination provision	Others	Total
Before 1979	138	0	0	5	143
1979	0	1	0	2	3
1980	0	24	0	1	25
1981	0	44	0	0	44
1982	0	95	0	2	97
1983	0	94	0	0	94
1984	0	80	0	3	83
1985	0	75	0	0	75
1986	0	75	2	3	80
1987	0	48	3	2	53
1988	0	61	22	1	84
1989	0	33	15	6	54
1990	0	22	21	2	45
1991	0	15	16	0	31
1992	0	6	8	0	14
1993	0	1	5	0	6
1994	0	0	2	0	2
1995	0	0	3	0	3
1996	0	0	3	0	3
1997	0	0	1	0	1
1998	0	0	0	0	0
1999	0	0	0	0	0
2000	0	0	1	0	1
Unknown	0	14	3	0	17
Total	138	688	105	27	958

The demise of the special minimum is even more obvious from table 4 as the number of recipients drops sharply in later eligibility years.

The only recipients of the special minimum in our sample in recent years are those who would have otherwise received the Windfall Elimination Provision, a special computation for workers who are also receiving a pension based on work not covered by the Social Security program rather than the regular wage-indexed PIA that we have analyzed previously in this note. The special minimum seems now only to be of benefit to cushion the effect of the Windfall Elimination Provision.

Conclusion

As we can see, projections indicate that only under very limited circumstances will one be able to benefit from the special minimum now and in the future. This conclusion is supported by our investigation of the MBR records which shows that the number of people who have received the special minimum PIA in recent years has dropped.

The minimum earnings necessary for a year of coverage dropped in 1991 from 25% to 15% of the "old-law" contribution and benefit base to give more people the opportunity to receive the special minimum. However, as we observed from the MBR records, the number of people who received the special minimum continued to drop even for people with eligibility years after 1990.

We know from our analysis that although the special minimum will continue to benefit those on the rolls whose earnings histories were of the appropriate type, without some legislative revision to the special minimum provision, that benefit calculation will have very limited (or no) applicability for those becoming newly eligible in the future.