Average Wages for 1985-90 for Indexing Under the Social Security Act

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Under the Old-Age, Survivors, and Disability Insurance (OASDI) program, all persons newly eligible for benefits after 1978 have their benefits computed using a procedure that first indexes their taxable earnings under Social Security. This indexation is designed to reflect the changes in levels of average wages in the economy over a person's working lifetime. Accordingly, the Social Security Act requires an annual determination of the national average wage[1] to update the series of average wage amounts used for this indexing purpose. The law also requires that the series be used to index the earnings intervals (or "bend points") in the formulas for computing primary insurance amounts and maximum family benefit amounts, as well as to index other program amounts such as the OASDI contribution and benefit base. See the Appendix to this note for more information on wage-indexed program amounts.

Percentage increases in the average wage series are used for all indexing purposes. The nominal amounts in the series are, therefore, relatively unimportant. Changes in data sources can be made provided that a single data source is used to measure a particular annual percentage increase in the average wage.

Beginning with the national average wage for 1978, wages used in the determination of the average have been defined as those subject to Federal income taxes. Initially, data on such

wages came from income tax returns processed by the Internal Revenue Service (IRS). Later, the data came from W-2 forms processed by the Social Security Administration (SSA). This note discusses the transition and compares the wage data from these two sources. To provide perspective on the transition, the note includes a brief summary of relevant information from earlier Actuarial Notes.

The Omnibus Budget Reconciliation Act of 1989 amended the method used to determine the average wage amounts for 1991 and later by including contributions to certain deferred compensation plans. (Such contributions are essentially income-tax-deferred wages.) The amendment also provided a transitional rule that required determination of special "deemed average wage" amounts for each year 1988-90. These deemed average wages were designed to increase the levels of the OASDI contribution and benefit base to what they would have been if such deferred compensation contributions had always been used in calculating the average wage series. These changes to the Social Security Act are discussed in detail on page 63.

Transition From IRS Data to SSA Data

Legislation designed to reduce the wage reporting burden on employers was enacted in 1976 and revised in 1977. The legislation eliminated the then existing requirement that employers report wages for each employee on a quarterly basis. It also permitted IRS and SSA ". . . to enter into an agreement for cooperative processing of a revised annual wage reporting form (i.e., form W-2). . . ."[2] Prior to 1978, the average wage had comparatively limited uses as an index and had been based on first quarter wage reports. Recognizing the

need for a transition from quarterly to annual wage reporting, which became effective for wages earned in 1978, the Senate Committee on Finance wrote that for "1977 and 1978, form 1040 data would be used and after 1978, forms W-2 data would be used."[3] The *Code of Federal Regulations* (see §404.211(c)) thus defines the average wage, for years after 1977, to mean "all remuneration reported as wages on Form W-2 to the Internal Revenue Service for all employees for income tax purposes, divided by the number of wage earners. . . ."

Following the legislative guidelines, SSA contracted with IRS for wage data from income tax returns for 1977 and 1978. SSA decided to extend its contract with the IRS due to SSA's difficulty in processing the large volume of W-2's and the need to announce the average wage by a statutory deadline. SSA was finally able to process the annual W-2 data with a sufficient degree of completeness, and in time to meet statutory deadlines for announcing the average wage, in 1986 for wages earned in 1985.

Data From Tax Returns Processed by IRS

Average wage determinations for 1978-84 were based on wage data collected by IRS during its processing of annual tax returns for 1977-84. Under the contract, IRS recorded the amount of wages subject to Federal income taxes (described on the tax return as "Wages, salaries, tips, etc.") from each return. This amount generally equals the total of corresponding wage amounts from attached W-2 forms. The IRS, however, did not check for discrepant wage amounts in all cases.

Also under the contract, IRS examined the W-2 forms attached to each joint tax return to distinguish those

returns with one wage earner from those with two wage earners. This distinction was essential to providing the total number of wage earners. The "raw" average wage was then computed as the aggregate amount of wages subject to Federal income tax divided by the total number of wage earners. The ratio of the raw average for the latest year's data to the corresponding average for the prior year's data was multiplied by the last official average wage to produce the next official indexing series amount.

Problem With
IRS Data for 1985

Under the laws in effect for tax years 1983-86, married couples filing joint tax returns could reduce their taxable income if they filed a Schedule W with their tax return to take advantage of the so-called two-earner deduction. For 1985 tax returns, the IRS decided to replace the examination of W-2's attached to joint tax returns with an examination of Schedule W's attached to tax returns. (Examination of the Schedule W's, rather than a simple count of the number of such forms, was needed to distinguish wage earners from those who were self-employed.)

Unfortunately, the decision to distinguish the number of wage earners on joint returns by examining Schedule W's heavily skewed the apparent number of wage earners because not all couples eligible for the two-earner deduction elected to complete Schedule W's. Thus, the number of joint returns with two wage earners was underrepresented in IRS's tabulation of 1985 wage data, causing an understatement of the number of wage earners and a corresponding substantial overstatement of the average wage.

Because the IRS data for 1985 lacked the proper split of joint returns between one-wage-earner couples and two-wage-earner couples, an estimate of the split was derived from the Taxpayer Usage Study (TPUS). The TPUS is a small, detailed sample of returns maintained by the IRS. Using the estimated proportion of two-wage-earner returns to total joint returns from the TPUS led to an estimated average wage

of $16,861.31—a 4.50-percent increase over the official 1984 average wage.

If SSA had not been steadily improving its own processing of wages from W-2 forms, the estimated average wage for 1985 given above would have become the official average wage for that year. Owing to improved processing speed, however, SSA had processed nearly all of the W-2's for 1985 by the time a choice had to made between using the estimated average wage based on IRS data and an average derived from SSA's own data. Given the uncertainty of the estimate using IRS data, the decision to use SSA's data was easily made.

Comparison of
SSA and IRS Data

As noted, beginning with the average wage for 1978, the average has been based on wages subject to Federal income taxes. Such wages were first captured from income tax returns processed by IRS. Later, the wages were from W-2 forms processed by SSA. Each data source has advantages and disadvantages.

With successive tabulations of tax returns for a given year, more and more wage earners are included in the average. With each additional wage earner included in the average, his or her complete wages for that year are also added. Thus, successive tabulations of a year's wages have relatively little trend effect on the average wage.

SSA data, on the other hand, are based on employer-filed W-2 forms. An individual may work for more than one employer during a year, either by holding more than one job simultaneously or by changing jobs during the year. For this and other reasons, the total number of W-2's filed by employers will exceed the total number of employees. At a given point in time, SSA may not have received and processed all the W-2's associated with the individuals identified as having at least one W-2 for the year. Thus, unless virtually all W-2's have been received, this process will tend to understate the average amount of wages per worker. As a result, the average wage increases

with each successive tabulation of a given year's wages (see table 1).

Theoretically, because of different filing deadlines, SSA should be able to process a higher proportion of the W-2 forms filed compared with tax returns processed by IRS. Employers must file their earnings statements with SSA by the February 28 following the year in which wages were earned. Tax returns, on the other hand, can be filed as late as April 15, and extensions of 4 months or more are granted in certain circumstances. The statutory deadline for promulgating the average wage for a given year is November 1 of the following year. To meet this deadline, SSA needs to have the raw data by early October. In the case of the W-2's processed by SSA, SSA should have virtually all the necessary data available by early October. For IRS, on the other hand, having complete data by early October is much less likely.

Another difference is that SSA data are more representative of the entire working population. All employers must distribute W-2 earnings statements to their employees and to SSA. In contrast, IRS data reflect only those employees who file income tax returns. Persons with wages below specified minimums are not required to file, thus raising the calculated average. Furthermore, minimum filing requirements can change over time, thereby affecting the average wage from one year to another. A factor that may lower the calculated average is the expectation that persons with high incomes are more likely to have complicated returns and file for extensions. Their tax returns are therefore less likely to be processed by October when the official average wage must be determined. The size of these two groups and their effect on the average wage series for 1978-84 are unknown.

As noted earlier, IRS did not check wages on tax returns against wages reported on attached W-2's. If an individual's W-2's were missing from a joint tax return with two wage earners, the person would not be counted as a wage earner even if the individual reported his or her wages on the return. Thus, IRS only provided an estimate of

the number of wage earners, and the estimate was probably somewhat low.

As far as errors on W-2's are concerned, the W-2's that employees attach to their income tax returns are checked to some extent by the employees themselves. (One is not likely to attach a W-2 to his or her income tax return if the W-2 shows $2,500,000 in wages and actual wages were only $25,000!) The W-2's employers send to SSA are not necessarily exact duplicates of those they give to their employees. Thus, it's likely that wages reported by employees to IRS will be more accurate than those reported by employers to SSA.

The wages processed by IRS are manually transcribed—first by the person preparing the tax return and then by IRS in preparing an electronic record. Manual transcription is a common source of error. In contrast, any employer with 250 or more employees must report W-2 data to SSA for each employee in computer-generated files. Therefore, the more automated data processing used by SSA, compared with the IRS processing, would tend to offset any advantage IRS data might have in terms of accuracy. On balance, then, no firm conclusions on the relative accuracy of the data can be drawn without further study.

SSA data can be compared with IRS data as follows:

Advantages of SSA data

* SSA data are more complete than IRS data; that is, a higher percentage of all workers will have their wages for a year processed by the time the average wage is determined.

* SSA data are more representative of all employees.

* SSA data are unaffected by change in income tax filing requirements.

* A more accurate count of the number of wage earners is possible with SSA data.

Disadvantage of SSA data

* The average wage from SSA data is more sensitive to the degree of completeness and therefore needs to be as close as possible to 100-percent complete to ensure accurate year-to-year increases in the average wage.

SSA Average Wage Data

Because SSA maintains earnings records for benefit computation purposes, SSA must collect data on wages subject to Social Security taxes. Recall that such wages differ from those used for indexing purposes. Because the wages used for indexing are those subject to Federal income taxes, such wages include wages in employment not covered by Social Security and covered wages in excess of the maximum annual amounts subject to taxation under the OASDI or Hospital Insurance programs. These wages may also exclude compensation, such as contributions to certain deferred compensation plans, that is taxable under Social Security. Throughout the remainder of this section, the term wages will be used to mean wages subject to Federal income tax—not wages covered or taxable under Social Security.

For each year after 1977, SSA has produced reports that show the number of workers and the aggregate amount of their wages. Normally, a report is produced four times a year.

The Social Security Act requires that the average wage be promulgated in the *Federal Register* by November 1 of the year following the year in which the wages were earned. Table 1 shows the number of workers and their wages from the last report prior to the November 1 deadline and corresponding data from the final[4] report for a year, produced in the second following year. The data are shown for calendar years 1981-90. Data for earlier years are not shown because SSA had not processed the data fast enough to produce any reports by November 1.

Completeness and Accuracy

Ideally, 100 percent of the wage data for a year should be processed and tabulated so that the average wage for the year can be accurately promulgated in the Federal Register by the statutory deadline—November 1 of the following year. How close actual processing comes to this ideal, based on the available reports, can be measured in two ways. One measure is the ratio of the average

wage from a pre-final report to that from the corresponding final report. The closer this average wage measure is to 100 percent, the more complete the processing. Another measure is the ratio of the number of workers from a pre-final report to the final number. Table 1 shows both such measures.

Table 1 indicates dramatic improvement in the processing of 1984 wage data, in terms of the percentage of workers whose wages were processed, and a smaller improvement in processing the 1985 data. Using the average wage measure of completeness, however, the improvement in processing 1985 wage data was even more significant than the prior year's improvement. In the 1985 data, nearly 98 percent of the workers represented in the final report were represented in the October[5] report. The October average wage, as a percentage of the final average, jumped to 99.66 percent—up from 93.74 percent for the corresponding 1984 data.

As shown in table 1, the average wage amount for any given year always increases from the October report to the final report for that year. In general, the higher the ratio of workers represented in the October report to those in the final report, the closer the October average wage is to the final average wage. In fact, for wages earned in 1985 and in 1987-90, when the former ratio was greater than about 97.5 percent, the October average wage was within 0.5 percent of the final average wage. As noted previously, this increase in the average wage by report date occurs because additional W-2 forms are processed for those persons with multiple employers, increasing the amount of wages for these persons without increasing their number.

Table 2 shows the year-to-year percentage increases in the average wage from October tabulations (column 2). Fluctuations in the percent increases are much greater than those for the corresponding averages from final reports (column 4) in the early 1980's, but after 1985 the two columns appear much more alike. The large fluctuations reflect the lack of completeness and resulting understatement of the

average wage in the October series during the early 1980's. Generally speaking, the more complete the processing of W-2's, the more accurate the average wage.

Accuracy of Social Security's wage-indexed calculations requires that year-to-year changes in the average wage indexing series should be correct. The absolute level of the series is immaterial. As noted before, data from IRS were used to determine the official wage-indexing series for 1978-84.

Table 2 shows that the year-to-year increases in average wages from 1981 to 1984, based on SSA's W-2 data tabulated in the final reports for those years (column 4), were very close to the corresponding increase in the official wage-indexing series (column 6). Thus, the final SSA data for the four years 1981-84 are believed to be as accurate as the accepted data from IRS. The percentage increase based on SSA's data from October reports, on the other hand, was clearly unreliable during that period.

Determining the
1984 Base Average Wage

As discussed earlier, SSA decided to use its own wage data for 1985 rather than an estimate based on IRS data. SSA then had to decide which 1984 wage tabulation to use in the determination of the annual wage increase. Three possible choices were the SSA wage data tabulated in September 1985, November 1985, and March 1986, the last being the final

Table 1.—SSA wage data from W-2 forms for calendar years 1981-90

| Calendar year of wages | Report date | Number of workers | | Aggregate wage amount (in millions) | Raw average wage | |
		Number (in thousands)	Percent of final report		Amount	Percent of final report
1981	9/82	34,089	31.69	$387,332	$11,362	87.53
	4/83	107,569	100.00	1,396,322	12,981	100.00
1982	8/83	19,892	18.88	261,684	13,155	95.83
	9/84	105,376	100.00	1,446,592	13,728	100.00
1983	9/84	32,713	29.83	435,877	13,324	92.47
	4/85	109,672	100.00	1,580,374	14,410	100.00
1984	9/85	93,595	83.07	1,338,067	14,296	93.74
	3/86	112,666	100.00	1,718,239	15,251	100.00
1985	10/86	114,922	97.73	1,827,321	15,901	99.66
	2/87	117,588	100.00	1,876,110	15,955	100.00
1986	10/87	115,135	97.64	1,885,046	16,372	98.97
	2/88	117,919	100.00	1,950,798	16,544	100.00
1987	10/88	119,557	98.00	2,082,269	17,417	99.77
	2/89	121,995	100.00	2,129,583	17,456	100.00
1988	9/89	122,797	98.57	2,244,036	18,274	99.86
	2/90	124,580	100.00	2,279,843	18,300	100.00
1989	10/90	126,909	98.66	2,411,003	18,998	99.88
	2/91	128,633	100.00	2,446,798	19,022	100.00
1990	10/91	127,554	98.34	2,535,192	19,875	99.71
	2/92	129,705	100.00	2,585,342	19,932	100.00

Table 2.—Comparison of average wages based on SSA wage data with the official average wage-indexing series, calendar years 1981-90

| Calendar year of wages | Raw average wage from SSA data | | | | Official average wage series | |
| | Average wage from October report | | Average wage from final report | | | |
	Amount (1)	Percentage increase (2)	Amount (3)	Percentage increase (4)	Amount (5)	Percentage increase (6)
1981	$11,362.46	. . .	$12,980.69	. . .	$13,773.10	10.07
1982	13,155.26	15.78	13,727.92	5.76	14,531.34	5.51
1983	13,324.43	1.29	14,409.98	4.97	15,239.24	4.87
1984	14,296.32	7.29	15,250.75	5.83	16,135.07	5.88
1985	15,900.51	11.22	15,954.96	4.62	16,822.51	4.26
1986	16,372.45	2.97	16,543.51	3.69	17,321.82	2.97
1987	17,416.59	6.38	17,456.36	5.52	18,426.51	6.38
1988	18,274.38	4.93	18,300.25	4.83	19,334.04	4.93
1989	18,997.93	3.96	19,021.53	3.94	20,099.55	3.96
1990	19,875.47	4.62	19,932.46	4.79	21,027.98	4.62

report of 1984 wages. The average wages associated with these choices and the resulting increases to the $15,900.51 raw average wage for 1985 (October 1986 report) are summarized below:

Report month	1984 raw average wage	Percentage increase to 1985 raw average wage
September 1985....	$14,296.32	11.22
November 1985....	15,077.33	5.46
March 1986.......	15,250.75	4.26

The September 1985 data were clearly incomplete, resulting in a major overstatement in the percentage increase. Based simply on the timing of the reports, both the September and November 1985 reports would appear to be fairly comparable to the October 1986 report. Such appearance, however, does not reflect the significant increase in processing speed that occurred in 1986. (For example, over 10 million more workers with processed wages were reported at the end of August 1986 than 1 year earlier.)

The 1984 raw average wage from the November 1985 report ($15,077.33), as a percentage of that from the final March 1986 report ($15,250.75), was 98.86 percent. With the increase in processing speed, the corresponding ratio of 1985 raw averages (from the October 1986 report and the final report) · was expected to be closer to 100 percent than to 98.86 percent.[6] This lent support to preferring the higher $15,250.75 average in the calculation of the 1985 average wage index.

The increase in average wages from 1984 to 1985, using the $15,250.75 raw average as a base, was 4.26 percent. This increase was much closer to the increase that had been anticipated by economists at the time. For example, in July 1986, SSA economists estimated that the increase in average wages from 1984 to 1985 was 4.03 percent. In contrast, the increase from the November 1985 reported average ($15,077.33) to the October 1986 reported average ($15,900.51) was substantially higher—5.46 percent.

As described earlier, an estimated 4.50-percent increase in average wages

from 1984 to 1985 was derived from IRS data. This estimate also suggested that the better choice for the 1984-85 increase was 4.26 percent. Thus, the available evidence supported a decision to use the final, March 1986 report of 1984 average wages as a base for measuring the increase in average wages. Multiplying the resultant 4.26-percent increase in raw average wages from 1984 to 1985 by the previously determined official 1984 average wage ($16,135.07) gave the official 1985 average wage of $16,822.51.

As shown in table 2, the increase in average wages from 1984 to 1985, based on final reports for both years, was 4.62 percent. Although this information was unavailable at the time of the 1985 average wage determination, the 4.62-percent figure substantiated the decision to use the final 1984 average wage report as a base for computing the 1984-85 increase. The comparison with the increase based on final reports shows that the 4.26-percent increase that was used to determine the official 1985 average wage was somewhat too low, but was still a better choice than the 5.46-percent alternative. It also indicates that the estimate based on IRS data proved to be quite accurate—at the time, however, there was considerable reluctance to rely on unproven sample data.

As just noted, the 4.26-percent increase in average wages from 1984 to 1985 was somewhat too low. Increases in the processing speed of SSA wage data in following years, however, tended to bring the ratio of average wages from October reports to final reports closer to 100 percent. The improvement toward 100-percent complete processing, in turn, gave somewhat larger increases in average wages than would otherwise have occurred, thereby compensating for the slightly low 1984-85 increase.

Problems With the Data for 1986 and 1987

Table 1 indicates that wage processing for 1986 was somewhat less complete than in 1985 or 1987-90. Table 1 shows that the number of workers reported with wages in 1986

increased only slightly from the corresponding figures for 1985 in both the October report and the final report. Table 1 also shows that the ratio of the October reported average wage for 1986 to the final average (98.97 percent) was significantly less than corresponding ratios for both the year before (99.66 percent) and the year after (99.77 percent). As shown in table 2, these factors combined to cause a low increase—2.97 percent—in the official average wage. This increase was significantly lower than that based on final data (3.69 percent), which itself was probably too low due to incomplete processing.

The October reported average wage for 1987 was 99.77 percent of the final average, indicating a return to the more complete processing that had marked the 1985 data. Because the 1985-86 increase was too low and because processing speed had returned to, or even slightly exceeded, the speed at which 1985 data were processed, the 1986-87 increase was too high. The cumulative increase from 1985 to 1987, however, was satisfactory.

Estimates of increases in average covered wages, based on a one-percent edited sample from SSA's Master Earnings File, tend to confirm the above analysis.[7] This sample indicates an approximate 4.8-percent 1985-86 increase and a 4.4-percent 1986-87 increase. The cumulative 1985-87 increase of 9.45 percent falls between the 9.53-percent cumulative increase based on the official average wage indexing series and the 9.41-percent cumulative increase based on final reports for 1985 and 1987.

Other Factors Affecting the Average Wage

There are factors affecting the average wage over which SSA has only limited control or capability to correct. One significant factor is reporting errors by employers and by service bureaus engaged by employers to report the wages of their employees. Some of these errors can be detected by noting inconsistencies with other wage or tax data reported. If an employer

report is so flawed, it will be sent back to the employer for correction. Nevertheless, some incorrect employee wage records do get posted to SSA's earnings file.

Consistency checks are applied to the data from the earnings file as the data are compiled for average wage reports. (This does not alter or affect the records in the earnings file.) Checks are added or modified as different types of errors are discovered.

As noted earlier, incomplete posting of wage reports can distort the average wage series. With regard to 1990 wage data, for example, processing of W-2 forms submitted on paper (as opposed to magnetic media) was slowed because the 1990 W-2 forms were larger and could not be electronically scanned as quickly as prior-year forms. Although virtually all such paper forms were processed in time for the 1990 average wage determination, the deadline was just barely met. Without improved capability in processing paper W-2's, slow processing could cause a degree of incompleteness and hence distortion in future average wage determinations.

Finally, as noted above, employer reporting errors can cause incomplete posting of wage records. When the final report on 1990 wages was tabulated this year, the Department of Health and Human Services (HHS), which includes SSA, had still not filed a corrected 1990 wage report with SSA. So for 1990, the wages of all HHS employees were left out of both the official determination and the final report.

Recent Legislation Affecting Average Wages and the OASDI Taxable Maximum

An individual whose employer offers a type of pension plan called a deferred compensation plan may elect to contribute a portion of his or her wages to such a plan. Income taxes on such contributions are deferred to retirement, when distributions from plans are made. Such distributions are not generally reported on W-2 forms since, at that time, they are considered retirement income and not wages. Because of the income-tax deferral of contributions, the

average wage series has not included these contributions and has included only relatively small distributions.[8]

Due to the increasing popularity of deferred compensation plans in the 1980's, wages contributed to such plans grew faster than overall wages.[9] Thus, the average wage indexing series grew more slowly as compared with its theoretical growth if contributions to such plans had been included in the series.

The rapid growth in contributions to deferred compensation plans, together with exclusion of such contributions from the wage indexing series, led to a concern over the proper operation of Social Security's automatic adjustment provisions. In particular, contributions to most deferred compensation plans are treated as covered wages under Social Security. Thus, for instance, the indexing of workers' earnings (which included deferred compensation) would be performed using an index that excluded deferred compensation. To the extent that deferred compensation became a significant factor in covered wage growth, the operation of the benefit formula, tax criteria, and other program functions might fail to operate as intended.

If this divergence between covered wages and indexing wages had been permitted to continue, another potentially serious problem could have developed. If future legislation were enacted to eliminate or curtail contributions to deferred compensation plans, then wages that would have been contributed to such plans would have suddenly become subject to income taxes, thus causing an abrupt increase in the average wage series. The Omnibus Budget Reconciliation Act of 1989 (P. L. 101-239) avoided this potential difficulty by requiring that the growth in the average wage series reflect the inclusion of deferred compensation contributions, beginning with the average wage for 1991.

Inclusion of deferred compensation plan contributions in wages used for the average wage series was anticipated to cause the series to grow faster. This faster growth would affect all wage-indexed program amounts beginning in

1993, causing them to be larger, in general, than they otherwise would have been. These increases, in turn, were expected to cause an overall net long-range cost to the Social Security program. A special provision of the new legislation, called a "transitional rule," was designed to offset this cost by raising the OASDI contribution and benefit base earlier, and to a greater degree, than it otherwise would have been affected.

Under the transitional rule, a separate set of average wages for calendar years 1988-90 was established for determining the contribution and benefit bases[10] for 1990-92. These special average wages have been referred to as "deemed average wages" in *Federal Register* notices, and that terminology is followed here.

The deemed average wage for 1988 was legislatively defined as the average wage index for 1988 plus 2 percent of the average wage index for 1987. Similarly, the deemed average wage for 1989 was defined as the average wage index for 1989 plus 2 percent of the average wage index for 1988. Finally, the deemed average for 1990 was defined as the product of the average wage index for 1989 and the quotient obtained by dividing (1) the raw average wage for 1990, including deferred compensation contributions, by (2) the raw average wage for 1989, excluding deferred compensation contributions.

The addition of 2 percent of the prior year's average wage to the current year's average was designed to approximate what the average wage would be if deferred compensation data were included in the average. The legislation, enacted into law in December 1989, required changes in the 1990 W-2 forms (and the instructions to employers for completing those forms) so that actual 1990 data on deferred compensation contributions could be tabulated in 1991. Usage of actual deferred compensation data in determining the 1990 deemed average wage was provided to compensate for previous estimation errors in the deemed wages for 1988 and 1989.

Table 3 compares the deemed average wages for 1988-90 with the average wage indexing series. The

Table 3.—Comparison of deemed average wage and average wage indexing series, 1987-90

Year	Deemed average wage series		Average wage indexing series	
	Amount	Percentage increase	Amount	Percentage increase
1987...........	...	...	$18,426.51	6.377
1988...........	$19,702.57	6.925	19,334.04	4.925
1989...........	20,486.23	3.977	20,099.55	3.959
1990...........	21,341.82	4.176	21,027.98	4.619

difference in the percentage increases in each type of average wage for 1988 over the 1987 average wage is exactly 2 percentage points by definition of the deemed average wage, and the 1989 increases are nearly equal. The difference in the 1990 percentage increases for each type of average wage, about 0.443 percentage points, is caused by the use of actual deferred compensation data in the 1990 deemed average. Thus, the 2-percent additive component of the previous deemed averages was too high by about 0.4 to 0.5 percentage points.

As mentioned earlier, the transitional rule was designed to increase the OASDI contribution and benefit base. The following tabulation indicates that the bases for 1990 and 1991, as a result of the 2-percent additive component of the deemed average wage, were $900 higher than they otherwise would have been. The tabulation also indicates that this difference dropped to $600 for the 1992 base, reflecting the usage of actual deferred compensation data.

Year	Contribution and benefit bases under—	
	Present law (deemed average wage series)	Average wage indexing series
1990........	$51,300	$50,400
1991........	53,400	52,500
1992........	55,500	54,900

The new legislation, as noted earlier, requires that the average wage index for 1991 and later reflect the combined growth of both wages and contributions to deferred compensation plans. The average wage index for 1991, in particular, will be equal to the product of (1) the average wage index for 1990, times (2) the ratio of the raw average wage for 1991 to that for

1990,[11] where each of the raw averages reflects inclusion of deferred compensation plan contributions. This process will prevent any further widening of the gap between average covered wages and the average wage indexing series. It does not, however, place the indexing series at the level it would have been if deferred compensation had always been included in the definition of wages. As noted previously, the deemed average wage series was designed on the latter basis in order to increase the maximum contribution base by a greater amount, relatively, than the other wage-indexed program amounts.

Notes

[1] The official term for the national average wage, as found in section 215(i)(1)(G) of the Social Security Act, is "SSA average wage index."

[2] Senate Report No. 94-550, p. 9.

[3] Senate Report No. 95-572, p. 22.

[4] The report is called final only because it is the last report produced for a year's wage data. Subsequent reports begin with the next year's data. Typically, only relatively minor adjustments to wage data for a given year are made after the final report for that year.

[5] For most years, reports were made in late September or early October. In 1986 and 1987, reports were also made in mid-October, and data from these later reports are shown in table 1. For 1982 wages, the last report prior to the November 1, 1983 deadline was in August 1983, but to simplify the presentation, we also call this report an "October" report.

[6] The ratio of these 1985 raw average wages subsequently turned out to be 99.66 percent.

[7] The estimates were provided by Kenneth G. Sander, Office of Research and Statistics, SSA.

[8] Distributions from a plan available only to certain State and local government

employees have been included on W-2 forms as part of wages subject to Federal income taxes. Thus, such distributions were automatically included in the average wage.

[9] This growth became evident from SSA's data only after contributions to certain deferred compensation plans became covered for Social Security purposes in 1984. It was noted that one category of workers—those whose taxable wages under Social Security exceeded their wages subject to income taxes—began to grow much more rapidly than the number of workers as a whole.

[10] The special average wages were also used to determine the "old law" contribution and benefit bases for 1990-92, as defined in the Appendix. Subsequent legislation established a separate contribution base for the Hospital Insurance (HI) program for 1991. This legislation required the HI contribution base to be indexed in the same way as the OASDI base. Thus, the HI base for 1992 was also determined on the basis of the increase in special average wages from 1989 to 1990.

[11] The raw average wage for 1990 must be the same one used in the determination of the deemed average wage for 1990.

Appendix

The following amounts are determined each year on the basis of increases in the average wage indexing series:

- the OASDI contribution and benefit base—the maximum amount of earnings subject to OASDI taxes and creditable towards benefits;
- the contribution and benefit base that would have resulted if the Social Security Amendments of 1977 had not been enacted— referred to as the "old- law" base;
- the Hospital Insurance (HI) contribution base—the maximum amount of earnings subject to HI taxes;
- the retirement earnings test exempt amounts;
- the amount of earnings required for a quarter of coverage;
- the dollar amounts ("bend points") in the formula for the primary insurance amount; and
- the dollar amounts ("bend points") in the maximum family benefit formula.

The table below shows the average wage indexing series for 1976-90 and the wage-indexed amounts for 1976-92.

Average wages and wage-indexed amounts determined under the automatic provisions, calendar years 1976-92

Calendar year	Average wage[1]	OASDI contribution and benefit base		HI contribution base[3]	Retirement earnings test annual exempt amounts	
		Present law[2]	"Old law"		Under age 65	Age 65-69[4]
1976	$9,226.48	$15,300	$15,300	$15,300	$2,760	$2,760
1977	9,779.44	16,500	16,500	16,500	3,000	3,000
1978	10,556.03	17,700	17,700	17,700	3,240	4,000
1979	11,479.46	22,900	18,900	22,900	3,480	4,500
1980	12,513.46	25,900	20,400	25,900	3,720	5,000
1981	13,773.10	29,700	22,200	29,700	4,080	5,500
1982	14,531.34	32,400	24,300	32,400	4,440	6,000
1983	15,239.24	35,700	26,700	35,700	4,920	6,600
1984	16,135.07	37,800	28,200	37,800	5,160	6,960
1985	16,822.51	39,600	29,700	39,600	5,400	7,320
1986	17,321.82	42,000	31,500	42,000	5,760	7,800
1987	18,426.51	43,800	32,700	43,800	6,000	8,160
1988	19,334.04	45,000	33,600	45,000	6,120	8,400
1989	20,099.55	48,000	35,700	48,000	6,480	8,880
1990	21,027.98	51,300	38,100	51,300	6,840	9,360
1991	. . .	53,400	39,600	125,000	7,080	9,720
1992	. . .	55,500	41,400	130,200	7,440	10,200

	Amount of earnings required for each quarter of coverage[5]	Bend points in PIA formula		Bend points in maximum family benefit formula		
		First	Second	First	Second	Third
1976	$50	. . .	. . .	. . .	. . .	. . .
1977	50	. . .	. . .	. . .	. . .	. . .
1978	250	. . .	. . .	. . .	. . .	. . .
1979	260	$180	$1,085	$230	$332	$433
1980	290	194	1,171	248	358	467
1981	310	211	1,274	270	390	508
1982	340	230	1,388	294	425	554
1983	370	254	1,528	324	468	610
1984	390	267	1,612	342	493	643
1985	410	280	1,691	358	517	675
1986	440	297	1,790	379	548	714
1987	460	310	1,866	396	571	745
1988	470	319	1,922	407	588	767
1989	500	339	2,044	433	626	816
1990	520	356	2,145	455	656	856
1991	540	370	2,230	473	682	890
1992	570	387	2,333	495	714	931

[1] To be used for indexing earnings. (Figures for earlier years were previously published in the *Federal Register*.)

[2] Amounts for 1979-81 represent ad hoc increases and are specified in the law.

[3] Prior to 1991, the HI contribution base was the same as the OASDI contribution and benefit base ("present law" amounts). The separate HI base for 1991 was specified by the Omnibus Budget Reconciliation Act of 1990.

[4] Beginning in 1983, the test does not apply at ages 70 or older. In 1955-82, it did not apply at ages 72 or older. Amounts for 1978-82 represent ad hoc increases and are specified in the law.

[5] Beginning in 1978, when reporting of all wages in private employment was changed from a quarterly to an annual basis, the unit of annual earnings required for each quarter of coverage was increased to $250 (with a maximum of 4 quarters of coverage credited for earnings of $1,000 or more) and became subject to the automatic-increase provisions for years after 1978.