



Social Security

Memorandum

Date: October 2, 2001 Refer to : TCC

To: Representative Jim Kolbe
Representative Charles Stenholm

From: Stephen C. Goss, Chief Actuary
Alice H. Wade, Deputy Chief Actuary

Subject: Benefit Levels under the *21st Century Retirement Act* --
INFORMATION

This memorandum compares estimated future benefit levels for retired workers assuming enactment of the *21st Century Retirement Act (H.R. 2771 with modifications to reflect the sponsors' stated intent)* to benefit levels *scheduled* under present law and benefit levels *estimated to be payable* under present law. For a detailed explanation of the provisions of *H.R. 2771*, please refer to our memorandum dated August 24, 2001. These estimated benefit levels under the proposal reflect the intent of legislation as described by Representative Kolbe's and Representative Stenholm's staff. The stated intent of several provisions differs from the legislative language in the bill. These discrepancies are indicated in table 1 of the memorandum dated August 24, 2001. It is anticipated that technical amendments to the bill that will conform to the stated intent will be forthcoming. All estimates are based on the intermediate assumptions of the 2001 Trustees Report plus additional assumptions described in our memorandum dated August 24, 2001.

Benefits *scheduled* under present law are not projected to be sustainable. Under these assumptions, the OASDI Trust Fund is projected to become exhausted in 2038. At that time, tax income only covers 73 percent of scheduled benefits. In 2075, tax income covers about 67 percent of scheduled benefits. For this reason, we also compare benefit levels under *H.R. 2771* (with modifications) to those *estimated to be payable* under present law. The present law benefits used in this comparison are automatically reduced each year beginning in 2038 so that the annual expenditures paid from the OASDI Trust Fund would equal the annual tax income received by the OASDI Trust Funds under the intermediate assumptions of the 2001 Trustees Report. The benefit reductions are assumed to apply proportionally to all beneficiaries. This is one interpretation of how the system might operate if no changes are made to current law.

All benefit levels presented in this memorandum are for hypothetical retired workers who have never been disabled. Table 1 compares the basic benefit formula scheduled under present law with the basic benefit formula proposed under **H.R. 2771**. (The basic benefit formula produces the primary insurance amount, or PIA.) The remaining tables, compare benefit levels for selected hypothetical scaled earners. (Hypothetical scaled earners reflect age-specific variation in the probability of work and in the average level of taxable earnings for individuals fully insured under the program.)¹ Tables 2, 3, and 4 provide ratios of benefits under **H.R. 2771** to present-law benefit level for lifetime single earners, one-earner couples, and two-earner couples, respectively.

OASI retirement benefits under the proposal reflect cost-of-living adjustments (COLAs) that are 0.33 percentage point lower each year than projected under present law. This results in benefits that are progressively lower, relative to present law, as age increases beyond initial eligibility at 62. Thus, in addition to benefit levels at age 65, benefit levels are shown in the tables for the hypothetical workers at ages 80 and 95.

OASI retirement benefits under the proposal are reduced (by about 2.5 percent, on average) due to increasing the benefit computation period and including all earnings in calculating the AIME, with one exception. For the lower earner of the two-earner couple or for one of the earners in the case that assumes equal earnings of husband and wife, no reduction is applied. Also, beneficiaries who have the proposed minimum benefit apply are assumed to have varying quarters of coverage depending upon their earnings level and year of retirement, as indicated in the chart below. This assumption is based on the projections of newly awarded retired worker beneficiaries under the intermediate assumptions of the 2001 Trustees Report.

Number of Quarters of Coverage Assumed for Hypothetical Scaled-Earner Retirees without Periods of Disability by Earnings Level and Year of Retirement

Earnings Level	2000	2020	2050	2070
Low	98	106	110	112
Medium	153	156	157	157
High	167	167	167	167

Individual account distributions calculated for the hypothetical workers do not reflect any voluntary contributions beyond the basic universal 2-percent level. Hypothetical workers shown in the tables are assumed to elect an annuity form of payout from their individual accounts at date of retirement. The annuities from the

¹ See Actuarial Note Number 144 for a complete description. This note can be found on the following website: <http://www.ssa.gov/OACT/NOTES/note144.html>

individual accounts are assumed to be indexed by CPI less 0.33 percentage point, consistent with the COLA provided for Social Security benefits under the proposal.

Because of the considerable variation in the actual yield of individual accounts that could be experienced by different workers at different times, two different individual-account annuity levels are shown in tables 2, 3, and 4. Under the *expected yield*, the following assumptions are made:

- During the accumulation period, individual accounts would be, on average, invested 50% in equities and 50% in long-term Treasury bonds.
- During the disbursement period (after retirement), the net real annuity yield is assumed to be 3 percent annually.
- The real yield on equities is assumed to average 6.5 percent annually (see earlier discussion of equity yield assumption in memorandum date).
- The real yield on long-term Treasury bonds is assumed to average 3.0 percent annually.
- The charge for annual administrative expenses is assumed to average 90 basis points during the accumulation period.

The *bond yield* scenario differs from the *expected yield* scenario by assuming that, during the accumulation period, the actual real yield on investments held in individual accounts is the same, on average, as the real yield on long-term Treasury bonds. This could occur for a specific individual if:

- Equities yield no more than bonds during their work years,
- The individual makes poor (unlucky) choices in timing asset allocations over time, or
- The individual invests conservatively, only in bonds.

This scenario also illustrates expected benefits on a "risk adjusted" basis, where risk-adjusted yields are set equal to the long-term bond yield.



Stephen C. Goss



Alice H. Wade

Table 1: Comparison of Benefit Formula Scheduled under Present Law to Benefit Formula Proposed for Retired Workers with no Disability Period under H.R. 2771¹

Bend Points for worker turning age 62 in 2001:

<u>First Bend Point</u>	<u>New Middle Bend Point²</u>	<u>Last Bend Point</u>
561	1,100	3,381

Formula Factors Applying to Worker Turning Age 62 in Indicated Year:

<u>Year Worker Turns Age 62</u>	<u>Under First Bend Point</u>	<u>Between First Bend Point and New Middle Bend Point</u>	<u>Between New Middle Bend Point and Last Bend Point</u>	<u>Above Last Bend Point</u>
<i>Present Law</i>	90%	32%	32%	15%
<i>H.R. 2771</i>				
2010	90%	51%	26%	13%
2020	88%	55%	16%	8%
2030	86%	41%	12%	6%
2040	72%	35%	10%	5%
2050	60%	29%	8%	4%
2060	50%	24%	7%	3%
2070	49%	24%	7%	3%

¹ For details of the provision of *H.R. 2771*, refer to the memorandum dated August 24, 2001.

² Under *H.R. 2771*, the new bend point is set at 196 percent of the first bend point.

Table 2: Ratio of Retirement Benefits Proposed under H.R. 2771 to Present Law OASI Benefit

*Benefits Levels for Single Earners Retiring at Age 65 with Various Scaled Pre-Retirement Earnings Levels**

(Intermediate assumptions of the 2001 OASDI Trustees Report plus additional assumptions described in the accompanying memorandum)

Current Age (Assuming Retirement at Age 65)	Retirement in 2020					Retirement in 2050					Retirement in 2070				
	OASI Benefit	IA Annuity Only		Total Benefit with IA Annuity		OASI Benefit	IA Annuity Only		Total Benefit with IA Annuity		OASI Benefit	IA Annuity Only		Total Benefit with IA Annuity	
		Expected Yield	Bond Yield	Expected Yield	Bond Yield		Expected Yield	Bond Yield	Expected Yield	Bond Yield		Expected Yield	Bond Yield	Expected Yield	Bond Yield
<i>Comparison is made to Benefits Scheduled to be Paid under Present Law</i>															
<i>Low Earner</i>															
65	1.04	0.08	0.07	1.12	1.11	0.70	0.30	0.20	1.00	0.90	0.62	0.29	0.20	0.91	0.82
80	0.99	0.08	0.07	1.07	1.06	0.67	0.29	0.19	0.96	0.86	0.59	0.28	0.19	0.87	0.78
95	0.95	0.07	0.06	1.02	1.01	0.64	0.27	0.18	0.91	0.82	0.56	0.27	0.18	0.83	0.74
<i>Medium Earner</i>															
65	0.81	0.10	0.08	0.91	0.89	0.52	0.35	0.24	0.88	0.76	0.49	0.34	0.23	0.83	0.72
80	0.78	0.09	0.08	0.87	0.85	0.50	0.34	0.22	0.84	0.72	0.47	0.33	0.22	0.79	0.68
95	0.74	0.09	0.07	0.83	0.81	0.48	0.32	0.21	0.80	0.69	0.44	0.31	0.21	0.75	0.65
<i>High Earner</i>															
65	0.73	0.11	0.09	0.84	0.82	0.46	0.41	0.27	0.87	0.73	0.38	0.39	0.26	0.77	0.64
80	0.70	0.10	0.09	0.80	0.79	0.44	0.39	0.26	0.82	0.70	0.36	0.37	0.25	0.73	0.61
95	0.66	0.10	0.08	0.76	0.75	0.42	0.37	0.25	0.79	0.66	0.34	0.36	0.24	0.70	0.58
<i>Comparison is made to Reduced Benefits Payable under Present Law</i>															
<i>Low Earner</i>															
65	1.04	0.08	0.07	1.12	1.11	0.96	0.41	0.28	1.38	1.24	0.91	0.43	0.29	1.34	1.20
80	0.99	0.08	0.07	1.07	1.06	0.97	0.42	0.28	1.38	1.24	0.90	0.42	0.28	1.33	1.19
95	1.30	0.10	0.09	1.40	1.39	0.96	0.41	0.28	1.37	1.23	0.89	0.42	0.28	1.31	1.17
<i>Medium Earner</i>															
65	0.81	0.10	0.08	0.91	0.89	0.72	0.48	0.32	1.20	1.04	0.72	0.50	0.33	1.22	1.05
80	0.78	0.09	0.08	0.87	0.85	0.72	0.49	0.32	1.21	1.05	0.71	0.50	0.33	1.21	1.04
95	1.02	0.12	0.10	1.13	1.12	0.72	0.48	0.32	1.20	1.04	0.70	0.49	0.33	1.19	1.03
<i>High Earner</i>															
65	0.73	0.11	0.09	0.84	0.82	0.63	0.56	0.37	1.19	1.00	0.55	0.58	0.38	1.13	0.94
80	0.70	0.10	0.09	0.80	0.79	0.63	0.56	0.37	1.19	1.01	0.55	0.57	0.38	1.12	0.93
95	0.91	0.14	0.12	1.05	1.03	0.63	0.56	0.37	1.18	1.00	0.54	0.56	0.38	1.10	0.91

* Illustrations assume that workers have no periods of disability prior to retirement.

Table 3: Ratio of Retirement Benefits Proposed under H.R. 2771 to Present Law OASI Benefit

*Benefits Levels for One-Earner Couples Retiring at Age 65 with Various Scaled Pre-Retirement Earnings Levels**

(Intermediate assumptions of the 2001 OASDI Trustees Report plus additional assumptions described in the accompanying memorandum)

Current Age (Assuming Retirement at Age 65)	Retirement in 2020					Retirement in 2050					Retirement in 2070				
	OASI Benefit	IA Annuity Only		Total Benefit with IA Annuity		OASI Benefit	IA Annuity Only		Total Benefit with IA Annuity		OASI Benefit	IA Annuity Only		Total Benefit with IA Annuity	
		Expected Yield	Bond Yield	Expected Yield	Bond Yield		Expected Yield	Bond Yield	Expected Yield	Bond Yield		Expected Yield	Bond Yield	Expected Yield	Bond Yield
<i>Comparison is made to Benefits Scheduled to be Paid under Present Law</i>															
<i>Low Earner</i>															
65	1.03	0.05	0.04	1.09	1.08	0.70	0.19	0.13	0.89	0.83	0.62	0.19	0.12	0.81	0.74
80	0.99	0.05	0.04	1.03	1.03	0.67	0.18	0.12	0.85	0.79	0.59	0.18	0.12	0.77	0.71
95	0.94	0.05	0.04	0.99	0.98	0.64	0.17	0.12	0.81	0.75	0.56	0.17	0.11	0.73	0.68
<i>Medium Earner</i>															
65	0.81	0.06	0.05	0.87	0.86	0.52	0.22	0.15	0.75	0.67	0.49	0.22	0.14	0.70	0.63
80	0.77	0.06	0.05	0.83	0.82	0.50	0.21	0.14	0.71	0.64	0.47	0.21	0.14	0.67	0.60
95	0.73	0.05	0.05	0.79	0.78	0.48	0.20	0.14	0.68	0.61	0.44	0.20	0.13	0.64	0.57
<i>High Earner</i>															
65	0.73	0.07	0.06	0.79	0.78	0.46	0.26	0.17	0.72	0.63	0.37	0.25	0.17	0.62	0.54
80	0.69	0.06	0.06	0.76	0.75	0.44	0.24	0.16	0.68	0.60	0.36	0.24	0.16	0.59	0.52
95	0.66	0.06	0.05	0.72	0.71	0.42	0.23	0.16	0.65	0.57	0.34	0.23	0.15	0.57	0.49
<i>Comparison is made to Reduced Benefits Payable under Present Law</i>															
<i>Low Earner</i>															
65	1.03	0.05	0.04	1.09	1.08	0.96	0.26	0.17	1.22	1.14	0.91	0.27	0.18	1.18	1.09
80	0.99	0.05	0.04	1.03	1.03	0.97	0.26	0.18	1.23	1.14	0.90	0.27	0.18	1.17	1.08
95	1.29	0.06	0.05	1.35	1.34	0.96	0.26	0.17	1.22	1.13	0.89	0.27	0.18	1.16	1.07
<i>Medium Earner</i>															
65	0.81	0.06	0.05	0.87	0.86	0.72	0.31	0.20	1.03	0.92	0.72	0.32	0.21	1.03	0.93
80	0.77	0.06	0.05	0.83	0.82	0.72	0.31	0.21	1.03	0.93	0.71	0.31	0.21	1.02	0.92
95	1.01	0.07	0.06	1.08	1.07	0.72	0.31	0.20	1.02	0.92	0.70	0.31	0.21	1.01	0.91
<i>High Earner</i>															
65	0.73	0.07	0.06	0.79	0.78	0.63	0.35	0.23	0.98	0.87	0.55	0.37	0.24	0.92	0.79
80	0.69	0.06	0.06	0.76	0.75	0.63	0.35	0.24	0.99	0.87	0.54	0.36	0.24	0.91	0.79
95	0.91	0.08	0.07	0.99	0.98	0.63	0.35	0.23	0.98	0.86	0.54	0.36	0.24	0.89	0.78

* Illustrations assume that workers have no periods of disability prior to retirement.

Table 4: Ratio of Retirement Benefits Proposed under H.R. 2771 to Present Law OASI Benefit

*Benefits Levels for Two-Earner Couples Retiring at Age 65 with Various Scaled Pre-Retirement Earnings Levels**

(Intermediate assumptions of the 2001 OASDI Trustees Report plus additional assumptions described in the accompanying memorandum)

Current Age (Assuming Retirement at Age 65)	Retirement in 2020					Retirement in 2050					Retirement in 2070				
	OASI Benefit	IA Annuity Only		Total Benefit with IA Annuity		OASI Benefit	IA Annuity Only		Total Benefit with IA Annuity		OASI Benefit	IA Annuity Only		Total Benefit with IA Annuity	
		Expected Yield	Bond Yield	Expected Yield	Bond Yield		Expected Yield	Bond Yield	Expected Yield	Bond Yield		Expected Yield	Bond Yield	Expected Yield	Bond Yield
<i>Comparison is made to Benefits Scheduled to be Paid under Present Law</i>															
<i>Medium Earner, Low Earner</i>															
65	0.91	0.08	0.07	0.99	0.98	0.60	0.31	0.21	0.91	0.81	0.54	0.30	0.20	0.85	0.75
80	0.87	0.08	0.07	0.95	0.93	0.57	0.30	0.20	0.87	0.77	0.52	0.29	0.19	0.81	0.71
95	0.83	0.08	0.06	0.90	0.89	0.54	0.28	0.19	0.83	0.73	0.49	0.28	0.18	0.77	0.68
<i>Medium Earner, Medium Earner</i>															
65	0.82	0.09	0.08	0.91	0.90	0.53	0.33	0.22	0.86	0.75	0.49	0.32	0.21	0.81	0.71
80	0.79	0.08	0.07	0.87	0.86	0.51	0.31	0.21	0.82	0.72	0.47	0.31	0.20	0.78	0.68
95	0.75	0.08	0.07	0.83	0.82	0.48	0.30	0.20	0.78	0.68	0.45	0.29	0.19	0.74	0.64
<i>Medium Earner, High Earner</i>															
65	0.78	0.10	0.08	0.87	0.86	0.49	0.36	0.24	0.85	0.73	0.43	0.35	0.23	0.78	0.66
80	0.74	0.09	0.08	0.83	0.82	0.47	0.34	0.23	0.81	0.70	0.41	0.33	0.22	0.74	0.63
95	0.70	0.09	0.07	0.79	0.78	0.45	0.33	0.22	0.77	0.67	0.39	0.32	0.21	0.71	0.60
<i>Comparison is made to Reduced Benefits Payable under Present Law</i>															
<i>Medium Earner, Low Earner</i>															
65	0.91	0.08	0.07	0.99	0.98	0.82	0.43	0.29	1.25	1.11	0.80	0.44	0.30	1.24	1.10
80	0.87	0.08	0.07	0.95	0.93	0.82	0.43	0.29	1.25	1.11	0.79	0.44	0.29	1.23	1.08
95	1.14	0.10	0.09	1.24	1.22	0.82	0.43	0.28	1.24	1.10	0.78	0.43	0.29	1.21	1.07
<i>Medium Earner, Medium Earner</i>															
65	0.82	0.09	0.08	0.91	0.90	0.73	0.45	0.30	1.18	1.03	0.73	0.47	0.31	1.20	1.04
80	0.79	0.08	0.07	0.87	0.86	0.73	0.46	0.30	1.19	1.04	0.72	0.46	0.31	1.18	1.03
95	1.03	0.11	0.09	1.14	1.12	0.73	0.45	0.30	1.18	1.03	0.71	0.46	0.31	1.17	1.02
<i>Medium Earner, High Earner</i>															
65	0.78	0.10	0.08	0.87	0.86	0.68	0.49	0.33	1.17	1.01	0.63	0.51	0.34	1.14	0.97
80	0.74	0.09	0.08	0.83	0.82	0.68	0.49	0.33	1.17	1.01	0.62	0.51	0.34	1.13	0.96
95	0.97	0.12	0.10	1.09	1.07	0.67	0.49	0.33	1.16	1.00	0.62	0.50	0.33	1.11	0.95

* Illustrations assume that workers have no periods of disability prior to retirement.