



## SOCIAL SECURITY

### MEMORANDUM

Date: November 8, 2016

Refer To: TCC

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Deputy Chief Actuary

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Subject: The Present Value of Expected Lifetime Benefits for a Hypothetical Worker Dying or Becoming Disabled at Age 30—**INFORMATION**

The table below displays the estimated present value of potential Social Security benefits provided based on the earnings of a specific hypothetical worker. The present values<sup>1</sup> of expected survivor and disability benefits assume the death or disability of a hypothetical married male worker at age 30 in 2016. The worker has earnings from ages 21 through 29 that equal the earnings of a medium scaled worker at those ages.<sup>2</sup> The worker has a wife age 28 and children ages 0 and 2 in 2016. Additionally, the wife has no earnings throughout her life, and does not remarry after the death of the worker. All estimates are based on the intermediate assumptions of the 2016 Trustees Report.

<b>Present Values of Potential Lifetime Benefits for a Hypothetical Worker Dying or Becoming Disabled at Age 30<sup>a</sup></b>				
Year of Death or Disability Entitlement	Survivor Benefits Assuming Worker Dies at Age 30	Benefits Assuming Worker Becomes Entitled to Disability Benefits at Age 30, by Trust Fund		
		<i>DI</i>	<i>OASI</i>	<i>OASDI</i>
(Thousands of present value dollars discounted to 1/1/2016)				
2016	\$674	\$484	\$219	\$703

<sup>a</sup> Worker has earnings starting at age 21 that equal the earnings of a medium scaled worker.

Note: If the hypothetical worker were single with no children, then no survivor benefits would be available and the present value of potential disability benefits would be less than two-thirds of the amounts shown.

The worker in this example has earnings that follow the medium scaled pattern. The medium scaled pattern is designed so that a retiree at age 65 in 2016, with medium scaled earnings through age 64, would have career average earnings (wage indexed to 2015, or age 64) of about \$47,730.20 (the projected national average wage index for 2015). However, in this illustrative example, the worker

<sup>1</sup> Present values are the total of expected future benefits discounted at the Trust Fund interest rate back to January 1, 2016.

<sup>2</sup> Scaled earnings patterns reflect the relative earnings level by age experienced during 1993-2012. For more details on the scaled earnings patterns, see Actuarial Note Number 2016.3 at <http://www.ssa.gov/OACT/NOTES/ran3/an2016-3.pdf>.

only has medium scaled earnings early in his career, through age 29. As a result, the career average earnings for the 30 year old in 2016 (wage indexed to 2015) would only be \$37,474 for a survivor case and \$31,947 for a disabled worker case.<sup>3</sup>

The table above provides the present values of expected scheduled benefits<sup>4</sup> for two distinct possibilities. The first is that the hypothetical worker dies at the beginning of 2016. The second is that the hypothetical worker becomes permanently disabled and that entitlement to disabled worker benefits begins in January 2016. For the possibility of death, at age 30, the present value includes all expected survivor benefits for the wife and children. For the possibility of permanent disability, the table shows the following three present values:

- The present value of expected benefits for the disabled worker and his dependents from the Disability (DI) Trust Fund – includes benefits paid to all beneficiaries while the disabled worker is alive and has not reached his disability conversion age (67 in this case).
- The present value of expected benefits from the Old-Age and Survivor (OASI) Trust Fund – includes benefits paid (1) to survivors after the disabled worker's death and (2) to all beneficiaries if the worker attains disability conversion age.
- The present value of the expected benefits for the disabled worker and his dependents from the hypothetical combined OASI and DI (OASDI) Trust Funds.

For the above scenarios of the worker's death at age 30 and of the worker's disability entitlement at age 30, we consider all types of survivor, disability, and later retirement benefits (for disabled workers reaching conversion age 67 to such benefits), except for benefits to student children, disabled-adult children, and parents based on caring for a disabled-adult child. Omission of these benefits results in a very small understatement of the present value of expected benefits.

Expected benefits for workers dying or becoming disabled at age 30 would be higher for those with higher earnings prior to age 30, and lower for those with lower earnings.

cc: Stephen C. Goss, ASA, MAAA  
Chief Actuary

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<sup>3</sup> Survivor and disability cases have 3 and 7 benefit computation years, respectively, at age 30.

<sup>4</sup> Scheduled benefits are those specified under current law.