

PPA Interest Rate Modification: Segment Rates



Common Purpose. Uncommon Commitment.

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Prior Law and Background of Change

Currently defined benefit plans' minimum lump sum benefit amounts are calculated using a single 30-year Treasury rate. Rates are published by the IRS.

Pension Protection Act (PPA) amendments to the Internal Revenue Code are changing the interest rates applicable for determining lump sums. For plan years beginning on or after Jan. 1, 2008, PPA requirements are moving toward using three distinct "segment rates" (rather than the simpler one rate used previously) to calculate lump sum benefits. These segment rates will still be determined by the IRS; however, rates are now going to be based on the corporate bond yield curve. The IRS recently issued Notice 2007-81, which provides guidance on how lump sum benefits will be calculated under the new PPA rules. The Notice can be found at: www.treasury.gov/press/releases/reports/irsnotice200781.pdf

Segment Rates

The cash flows used to determine lump sum benefits are defined by a plan's normal form annuity benefit. Annuity payments are discounted from the time they are expected to occur to the date the lump sum is being determined to give a present value amount.

Using segment rates, expected future benefit payments are divided into three categories: those projected to occur in the short term; the intermediate term; and the long term. The specific ranges for each segment's period, beginning from the date the lump sums are determined, are as follows: segment one, 0 to 5 years; segment two, 6 to 20 years; segment three, 21 years or more. Cash flows projected (by the plan's normal form annuity benefit) to occur during a particular period will be discounted using the segment rate for that period: Benefit payments expected to occur in the first five years will be discounted using the first segment interest rate; benefit payments expected to occur more than five years but less than 20 years from the date of the lump sum will be discounted using the second segment interest rate; benefit payments expected to occur more than 20 years from the date of the lump sum will be discounted using the third segment interest rate.

The following table shows how the new rates would compare to the 30-year Treasury rate (currently used) for Sep. 2007:

<u>Segment Rates</u>			<u>30-Year</u>
<u>First</u>	<u>Second</u>	<u>Third</u>	<u>Treasury</u>
<u>Segment</u>	<u>Segment</u>	<u>Segment</u>	<u>Rate</u>
5.28%	6.12%	6.55%	4.79%

Transition

A transitional allowance exists to move from the old rates to the new rates. Beginning in 2008, the new rates will be blended together with the old rate at a certain percentage over the transition period.

This transition occurs over a 5-year period. In 2008 the new rates will be given 20% of the weight. The weight given to the new rates then increases 20% annually until none of the weight is given to the Treasury rate in 2012. An example of this blending is shown below. Using Sep. 2007 segment rates and the 30-year Treasury rate (both from above), the blended rate in 2008 for the first segment would be computed as follows:

$$(4.79\% \times 80\%) + (5.28\% \times 20\%) = \mathbf{4.89\%}$$

The three Sep. 2007 blended rates are shown in the table below using 2008's blending percentage and the applicable 30-year Treasury rate of 4.79%:

<u>Blended Segment Rates</u> <u>(no averaging)</u>		
<u>First</u> <u>Segment</u>	<u>Second</u> <u>Segment</u>	<u>Third</u> <u>Segment</u>
4.89%	5.06%	5.14%

How will this affect Lump Sum Amounts?

Lump sum calculations are dependent on specific participant's projected benefit payout and the effect of this change will vary from individual to individual. However, general observations can be made.

First, prior to the PPA amendment, minimum lump sum amounts are tied to the 30-year Treasury rate. A Government security, this represents an essentially default-free investment. The decision to switch to a rate based on somewhat riskier corporate bonds will therefore almost certainly result in higher rates, on average, being used to discount projected cash flows. This can already be seen in the Sep. 2007 rates indicated above. Each segment rate (5.28%, 6.12% and 6.55%) is considerably higher than the 30-year Treasury rate of 4.79%. Cash flows will be discounted at higher rates, and consequently, lump sum values will decrease.

Second, the exchange of one rate for three rates also has probable implications. Again, as indicated above by the Sep. 2007 example, yield curves tend to increase with time. Because of this tendency, individuals will be affected differently. For example, younger plan participants will likely be affected more by this change than older participants. Younger participants' cash flows are projected to occur further into the future and are thus subject to higher rates (and, consequently, lower lump sum payments). Similarly, a larger portion of older participants' cash flows will fall into the first and second segments (the lower end of the yield curve). An example of how this change may affect certain individuals is provided below.

This table uses the following assumptions:

- Sep. 2007 blended rates used to determine the 'Lump Sum New' and Sep. 07 30-year Treasury rate used to determine the 'Lump Sum Old;'
- Annual benefit amount is \$1,000 in the form of a 10 year certain and life annuity beginning at age 65;
- Mortality is assumed to follow an applicable mortality table for 2008.

Changes in Lump Sum Amount due to Segment Rates

Age	Lump Sum Old	Lump Sum New	Difference	% Change
20	1,386.23	1,195.64	(190.59)	-13.75%
30	2,223.48	1,978.09	(245.38)	-11.04%
40	3,574.35	3,281.64	(292.71)	-8.19%
50	5,777.41	5,494.43	(282.98)	-4.90%
55	7,385.89	7,134.14	(251.75)	-3.41%
60	9,531.00	9,317.15	(213.84)	-2.24%
65	12,535.75	12,369.36	(166.39)	-1.33%
70	11,237.21	11,085.05	(152.17)	-1.35%

Notice that for each age the lump sum decreased, with the largest percentage decreases occurring for the youngest participants.

Mortality Guidance

PPA also required the IRS to issue updated mortality assumptions. Guidance has been issued by the IRS in terms of lump sum mortality to be used for 2008 plan year lump sums. Information on this change has been detailed in an Internal Revenue Bulletin – Rev. Rul. 2007-67; this can be found at:

www.irs.gov/pub/irs-tege/rr2007-67.end.pdf

The examples in this paper use the updated lump sum mortality assumption when analyzing an overall change in lump sum amounts. The 2008 applicable mortality table reflects slight improvement in mortality at most ages. In general, this change *somewhat* mitigates the effect of the higher segment rates, causing lump sum amounts to be higher than they otherwise would have been had old (GAR '94) mortality continued to be assumed.

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