

Assessing the Impact of Rising Interest Rates on January 2011 Pension Discount Rates



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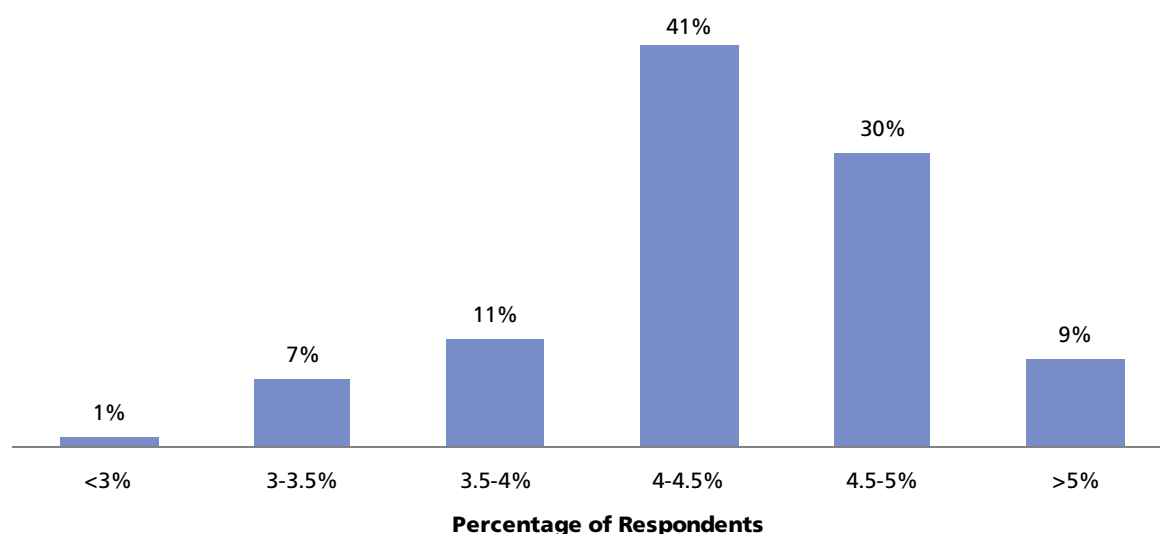
As I have discussed in several recent articles in *ING Investment Weekly*, the Pension Protection Act of 2006 (PPA) dictates that plan sponsors must choose between two methodologies to establish the discount rate used to calculate the present value of future pension liabilities. Sponsors may employ either 1) a one-month average of A-Aaa rated corporate bond yields or 2) a 24-month average of these same yields. This choice will have a significant impact on a plan's funded status volatility and, thus, its minimum contribution requirements. Unless additional relief is legislated by Congress or a special allowance is granted by the IRS, each plan sponsor must abide by its chosen method for the next five years. As such, the choice sponsors make now will have a significant impact on plan contribution amounts not only for 2010 but also 2011, 2012 and beyond.

In this article, I analyze the impact on the liability discount rate and the PPA target liability as of January 1, 2011, under both interest rate methods

and assuming interest rates rise during 2010, as many expect they will.

Although not a certainty by any means given the still-shaky economic environment, a majority of investors and market observers expect interest rates to rise during 2010. Of the respondents to a survey by International Strategy & Investment Group, 80% believe that the ten-year Treasury yield will finish 2010 above 4%; it's currently in the neighborhood of 3.7%. Under classic financial theory, long-maturity interest rates should be close to the nominal gross domestic product (GDP) growth rate. Assuming a nominal GDP growth rate of 5–6% for 2010, we would expect long-maturity interest rates to move toward that level. Obviously, there are other factors beyond GDP that may drive interest rates higher, such as ballooning budget deficits, limited Treasury purchases by foreign banks as the U.S. current account deficit shrinks and Federal Reserve tightening.

Where will the ten-year Treasury yield be at year-end 2010?



Source: International Strategy & Investment Group

The table below presents the results of my analysis under the 24-month-average method based on several interest rate scenarios. For the purpose of this discussion, I assumed that the interest rate increases would occur linearly on a monthly basis during 2010.

As you can see, unless interest rates increase at least 200 basis points, the 24-month-average will be lower as of January 1, 2011, versus January 1, 2010. This is mostly due to the fact that the very high rates during 2008 will be moving off the averaging period. As a

result, the liability will increase in value due to a fall of the 24-month-average under most scenarios considered in this analysis.

Independent from the change in the 24-month average and not reflected in the table below is the fact that the liability also grows due to the interest cost (6.50–6.75% for most plans during 2010) and the cost of additional benefits accrued by active participants (typically 2–3%) for pension plans that are not frozen.

Impact of rising interest rates — 24-month-average method								
	Same Average at 1/1/2011 as at 1/1/2010	Parallel Shifts vs. December 2009 Rates (%)			Non-Parallel Shifts vs. December 2009 Rates (%)			
Interest Rate Scenarios								
First Segment: for benefits payable within 5 years	N/A	+2.0	+1.5	+1.0	+2.0	+2.0	+1.0	+1.0
Second Segment: for benefits payable between years 6 and 20	N/A	+2.0	+1.5	+1.0	+1.5	+1.5	+0.75	+0.75
Third Segment: for benefits payable beyond 20 years	N/A	+2.0	+1.5	+1.0	+1.0	+0.5	+0.5	+0.0
Discount Rates — 24-Month-Average Method								
First Segment: for benefits payable within 5 years	4.60%	3.63%	3.50%	3.36%	3.63%	3.63%	3.36%	3.36%
Second Segment: for benefits payable between years 6 and 20	6.65%	6.57%	6.43%	6.30%	6.43%	6.43%	6.23%	6.23%
Third Segment: for benefits payable beyond 20 years	6.76%	7.07%	6.93%	6.80%	6.80%	6.66%	6.66%	6.52%
Statistics								
Liability at 1/1/2011 (\$million)	\$2,072	\$2,040	\$2,080	\$2,121	\$2,102	\$2,126	\$2,153	\$2,178
% Increase (Decrease) vs. "No Change Column"	N/A	-1.5%	0.4%	2.3%	1.4%	2.6%	3.9%	5.1%
Single Equivalent PPA Discount Rate	6.65%	6.76%	6.63%	6.50%	6.56%	6.48%	6.40%	6.32%
Increase (Decrease) vs "No Change Column"	N/A	0.11%	-0.03%	-0.16%	-0.09%	-0.17%	-0.26%	-0.33%
Duration	14.8	14.7	14.9	15.0	14.9	15.0	15.1	15.2

The table below reflects the one-month-average method and is based on the same interest rate scenarios as the previous table. As you can see, if interest rates were to increase during 2010, the liability discount rate would increase, resulting in a lower liability versus the 24-month-average method under all interest rate increase scenarios considered in this analysis.

Many plan sponsors are seriously considering using the 24-month-average method in an effort to reduce their minimum required contributions for the 2010 plan year. They also believe that by reducing the year-to-year volatility of their liability, it will also

reduce the volatility of required contributions. We believe this is a flawed approach for most plans.

As mentioned in my prior articles on this topic, the only way to reduce contribution volatility is to reduce the volatility of the funded status (i.e., assets minus liability). If that's a sponsor's goal, the best course of action is to employ the one-month-average discount rate method in concert with a bond portfolio that closely matches the interest rate sensitivity of the liability. This will increase the correlation between assets and liabilities, reduce funded status volatility and, finally, lower the volatility of future minimum required contributions. ■

Impact of rising interest rates — one-month-average method								
	Same Average at 1/1/2011 as at 1/1/2010	Parallel Shifts vs. December 2009 Rates (%)			Non-Parallel Shifts vs. December 2009 Rates (%)			
Interest Rate Scenarios								
First Segment: for benefits payable within 5 years	N/A	+2.0	+1.5	+1.0	+2.0	+2.0	+1.0	+1.0
Second Segment: for benefits payable between years 6 and 20	N/A	+2.0	+1.5	+1.0	+1.5	+1.5	+0.75	+0.75
Third Segment: for benefits payable beyond 20 years	N/A	+2.0	+1.5	+1.0	+1.0	+0.5	+0.5	+0.0
Statistics								
Liability at 1/1/2011 (\$million)	\$2,265	\$1,723	\$1,838	\$1,965	\$1,901	\$1,979	\$2,072	\$2,162
% Increase (Decrease) vs. "No Change Column"	N/A	-23.9%	-18.9%	-13.2%	-16.1%	-12.6%	-8.5%	-4.5%
Single Equivalent PPA Discount Rate	6.07%	7.97%	7.49%	7.02%	7.25%	6.97%	6.66%	6.37%
Increase (Decrease) vs. "No Change Column"	N/A	1.90%	1.42%	0.95%	1.18%	0.90%	0.59%	0.30%
Duration	15.5	13.4	13.9	14.4	14.1	14.5	14.8	15.2

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