

FASB ROA Assumption As of December 2013

Background

The FASB expected return on assets (ROA) assumption is used by the Pension Plan and Retiree Benefits Plan (the “Plans”) actuary (AonHewitt) in its determination of the annual retirement benefit expense projections. This assumption is a long-term assumption and as such should not be adjusted frequently. The assumption should be monitored annually and changed if the observed returns deviate significantly from the current assumption, or if certain conditions change.

The process Trust Fund Investments uses to evaluate the reasonableness of the expected ROA assumption is to look to multiple data when evaluating the current year’s expected return assumption. Generally, those data sets are:

- A “backward looking” historical rolling return analysis using historical returns for a portfolio with an equity & bond asset mix similar to the Plans’, over rolling 10-year, 20-year, 30-year and 40-year periods;
- A “backward looking” 1000 trial monte carlo, over a 30-year horizon, using historical returns, risk and correlations for a portfolio with an equity & bond asset mix similar to the Plans’;
- A “forward-looking” simulation of expected returns for a portfolio with an asset allocation similar to the Plans’ as developed by the Plans’ independent external actuary, AonHewitt. (Prior to 2010 a supplemental simulation was conducted by the Plans’ independent external investment consultant EnnisKnupp; however in 2010 the actuarial firm and consulting firm merged and since then a single “forward-looking” simulation has been conducted.)

In addition to different models or capital market return assumptions, additional consideration can include an active management premium, past success relative to expected returns, and other qualitative expectations.

Assumption Setting Process for 2013

The FY 2012 ROA assumption for the Pension Fund is 7.75% and 7.75% for the Retiree Benefits Plan (RBP).

It has become an acceptable practice, when developing long-term (i.e. 10 year or greater) forecasts of expected returns, to assume no premium for international, mid- or small-cap equities, and let the investment case for these assets reside on the diversification benefits. In this vein, when examining historical returns to judge the appropriateness of the FASB ROA assumptions, it is reasonable to utilize the S&P 500 returns and US Core Bond Index (Barclays US Aggregate Bond Index) as they provide the longest historical data set – and length of time is deemed more important for this purpose than ‘over engineering’ the process through incorporating sub asset classes with significantly less historical data. The allocation to equity/bonds is by far the more influential factor in determining returns.

In 2013, the Pension’s approved targeted asset investment mix was:

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|----------------------------|---------------------|---------------------------------|
| • 45% public equities | • 5% private equity | • 10% convertibles |
| • 5% real asset strategies | • 3% hedge funds | • 32% fixed income ¹ |

¹ including approximately 50% in alternative fixed income strategies.

For the “backward looking” analyses, a high level 55/45 equity-fixed allocation was utilized for the Pension, reflecting its ‘effective’ equity exposure. A 60/40 target policy mix of stocks and bonds was used for the RBP plan.

Historical Rolling Returns

The historical rolling return analysis draws on returns from 1926 to 2012.

Summary results for the Pension are:

- The median return over the 78 10-year periods (that is the 10-years ending 12/10, 10-years ending 12/09, etc.) is 8.3%.
- Over 20-year periods, the median of the 68 periods is 8.6%.
- Over 30-year periods, the median of the 58 periods is 8.7%.
- Over 40-year periods, the median of the 48 periods is 9.0%.

Summary results for the Retiree Benefits Plan (RBP) are:

- The median return over the 78 10-year periods (that is the 10-years ending 12/10, 10-years ending 12/09, etc.) is 8.7%.
- Over 20-year periods, the median of the 68 periods is 9.2%.
- Over 30-year periods, the median of the 58 periods is 9.1%.
- Over 40-year periods, the median of the 48 periods is 9.3%.

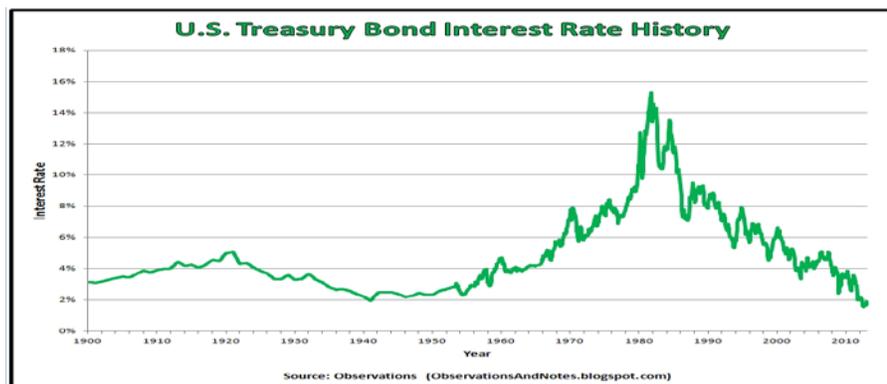
Historical Monte Carlo Results

The monte carlo simulation draws on historical returns, risk and correlations from 1926 through 2012.

- The simulation’s 50th percentile return is 8.2% for the Pension.
- The simulation’s 50th percentile return is 8.4% for the RBP.

Special Note re. Fixed Income & Interest Rates

Fixed income returns in the near future could fluctuate given the current low interest rate environment (10-year Treasury +/- 2%). However, it is unclear as to when and to what extent interest rates will rise. For sensitivity purposes, a second monte carlo simulation was conducted focusing on a historical full interest rate cycle to further test the backward looking analysis. Research showed that interest rates were at lows of near 2% in 1941, similar to today’s levels and subsequently rose to a high of over 14% in the 1980s (see chart below). Thus, the second monte carlo draws on historical returns, risk and correlations from October 1941 through 2012.



The results of the full interest rate cycle monte carlo were:

- The simulation's 50th percentile return is 8.9% for the Pension.
- The simulation's 50th percentile return is 9.1% for the RBP.

Forward Looking Simulation

The plan's actuary, AonHewitt, has run a simulation based on the Plans' asset mix and used their capital market assumptions, with an underlying inflation rate consistent with the Plans' other actuarial assumptions. AonHewitt recommends that the selected ROA fall between the 35th and 65th percentile returns as generated by their model.

Pension

Based on their 2013 Q4 assumptions, the AonHewitt simulated distribution of possible returns yields a median expected return of 7.51% with a 35th / 65th range of 8.38% - 6.65%.

The Pension Plan's observed alpha (active management outperformance) has ranged from a high of 120 bps to 50 bps over the trailing 10-years. The 3-year rolling average alpha was 47 bps. It is important to note that these historical alpha figures reflect little impact from Alternative Investments, as late 2011 marked the first year the Pension Fund has had Alternatives in its asset mix.

Further, based on alpha expectations ranging from 100-150 bps from active equity management and 50-100 bps for active fixed income management, weighted according to the Plan's current asset allocation and utilization of active & passive management (including consideration to those asset types for which AonHewitt's capital market assumptions include an active management premium), yields a forward looking alpha expectation of approximately 70-95 bps.

In summary, based on a review of the Pension Fund's historical realized alpha, the Pension Plan's actuary is supportive of including a return premium to the expected return generated from their model.

Retiree Benefits

For the RBP, based on their 2013 Q4 assumptions, the AonHewitt simulation yields a median expected return of 6.83%, with a 35th / 65th range of 7.70% - 5.97%. The RBP has had an indexed approach to its equity assets since 2006, and has demonstrated alpha of 60 bps over the past 2 years and 100 bps over the past 3 years, and 20 bps over the past 5 years. For the RBP, a forward-looking alpha expectation, modified to adjust for the 100% passive equity management of the Fund, yields a forward-looking alpha expectation of approximately 20-40 bps for the RBP.

Based on a review of the RBP's historical realized alpha, the plan's actuary is supportive of including a return premium to the simulated expected return generated from their model.

Summary

Pension

The current 7.75% Pension assumption falls in the range of results from the “backward looking” analyses and the forward-looking projection (with and without including the alpha premium). We do not believe the difference in the observed median return of the various analyses compared to the current assumption is meaningful enough to warrant revising the assumption.

Retiree Benefits

The current 7.75% RBP assumption is supportable from the results of the “backward looking” analyses and while within the range of outcomes of the forward-looking projection, it is at the low-end of the 35th / 65th range.

While we do not place more weight on AonHewitt’s (or any entity’s) ability to forecast future returns as being more accurate than historical results, in the interest of conservatism, we elect to gravitate more toward the expectations-based analyses and place less weight on historical experience in light of current market conditions and accordingly, are reducing the RBP assumption by 50 bps to 7.25%.