



STATE OF WISCONSIN
Department of Employee Trust Funds
David A. Stella
SECRETARY

801 W Badger Road
PO Box 7931
Madison WI 53707-7931
1-877-533-5020 (toll free)
Fax (608) 267-4549
<http://etf.wi.gov>

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2010 Variable Fund Effective Rate and Variable Annuity Adjustment

This year's Variable Fund effective rate is +33% and the annuity adjustment is +22%. Usually, the difference between the two rates is not as large as it is this year. Therefore, many of the approximately 35,000 retirees who participate in the Variable Fund may be wondering: Why is there an 11% difference this year?

There is no single, simple answer to this question. Below, we have outlined a few of the major reasons behind the 11% difference between the two rates, but it is important to understand that each year the difference between the Variable effective rate and annuity adjustment is different. In general, the difference has often been in the range of four to six percentage points. However, larger differences are not uncommon. For example, since 1986, the difference has been seven points once (1999), eight points four times (1988, 1989, 1995 and 2006), nine points once (2003) and 10 points once (1991). The difference between the two rates is different each year because the independent Wisconsin Retirement System (WRS) actuary has to take into account the actuarial variations each year, such as carryover, rounding and mortality rates. [Review the rates over the last 25 years.](#)

You should also keep in mind that although the Variable Fund last year experienced its largest gain since 1986, it also experienced its largest single-year loss in 2008. These dramatic swings tend to have an exaggerated effect on the actuarial variations necessary to calculate the final annuity adjustments.

The major reasons behind the 11% difference between the two rates for 2009 are listed here and more fully explained below:

- Reduction due to the 5% assumption needed to pay benefits
- Carryover from last year
- Timing (the months that annuities were NOT reduced in 2009 must be accounted for)
- Carryover to next year

Reduction due to the 5% assumption needed to pay benefits: When funds are transferred to the annuity reserve at retirement to pay the benefits of retirees in the Variable Fund, there is an assumption built into the funding calculation that annual investment earnings credited to the reserve will be at least 5%. When calculating the annual Variable adjustment the relative difference in the growth of the Variable Fund based on the actual return versus the 5% assumed return must be determined. This is done by dividing the investment earnings by 5%. This calculation resulted in a beginning surplus amount of 25.5% available for distribution before any other adjustments (see below) came into play.

Carryover from last year: Last year, the -42% Variable annuity adjustment should have been -42.7%. However, by law, the WRS actuary is required to truncate (drop) the adjustment to the lower whole percentage; hence, the -42% rate. The -0.7% (or about \$32 million in losses) was

carried over to this year's calculation and this had a large impact on this year's adjustment. This \$32 million carryover loss resulted in a 1.3% reduction in this year's adjustment.

Timing: Each year, the WRS actuary calculates the annuity adjustments based on investment results from January 1 to December 31, which is consistent with how investment returns are measured. However, ETF has to make the annuity adjustments effective with the April benefits that are paid May 1. Therefore, there is a three month "lag time" that is factored into the calculation of the annuity adjustments each year. Because of the "lag time", Variable annuities paid in the first few months of 2009 did not reflect the 42% reduction based on 2008 returns. ETF was not adjusting annuities by -42% in the first few months of 2009, *even though there was roughly a 40% loss in the annuity reserve*. The adjustment for this lag time reduced this year's adjustment by another 2.6%. (Conversely, benefits paid in the first few months of 2010 did not reflect the 22% increase attributable to 2009 investment returns so there will be some carryover gain applied to next year's adjustments.) Some years, such as in 2009, this lag time can have a positive effect and in other years it can have a negative effect.

Carryover to next year: As pointed out earlier, state law requires the WRS actuary to truncate the calculation of the annuity adjustment to a whole percentage. As a result, the Variable adjustment was reduced by 0.5% from 22.5% to 22%. The 0.5% will be carried over into next year's calculation.

Conclusion: The above adjustments explain the bulk of the 11% difference in the Variable effective rate and annuity adjustment. Other factors, such as mortality experience, both add to and subtract from the final calculations. These calculations are made every year with differing effects depending on the actual investment and system experience. For the exact calculations used to determine this year's Variable Fund annuity adjustment, go to page 15 of the actuary's [report](#). This year's actuarial report and reports from previous years are available on the ETF Internet site at: http://www.etf.wi.gov/publications/actuarial_studies.htm.

Additional Information:

Methodology Reviewed by Independent Actuaries: The methodology used by ETF and the WRS actuary to determine annuity adjustments has been reviewed and approved by independent actuaries.