

Asymmetric weights u_i are those that give a mean revision in the trend of exactly zero as computed from an asymmetric vs symmetric filter with linearly extrapolated estimates:

$$u_i = w_i + \frac{1}{\alpha m + \frac{\beta}{2} m(m+1)} \left\{ \alpha \sum_{i=m+1}^n w_i + \beta \left[\sum_{i=1}^n i w_i - \sum_{i=1}^m i w_i \right] \right\}$$

where the w_i are corresponding symmetric weights and $m < n$.

A plot of the ± 1 standard-error range about the “expected zero revision” using the above asymmetric weights is below. The assumptions in this plot are:

$n = 5$ for symmetric filter

$m = 3$ since interested in end point trend revision in this example

$\alpha = 0$ (intercept of linear regression fit to end of series)

σ^2 range = 0.1 – 10. This is the intrinsic variance in the series. Smallest variance corresponds to curves closest to the $E(R) = 0$ line.

