

Plots to Explore the Perfect Foresight Model.

Using the Jupyter notebook [Gentle-Intro-To-HARK-PerfForesightCRRA](#) as your starting point:

1. [PerfForesightCRRA](#) derives a number of results as approximations; for instance, the exact formula for the consumption function is derived as

$$\mathbf{c}_t = \left(\frac{\mathbf{R} - (\mathbf{R}\beta)^{1/\rho}}{\mathbf{R}} \right) \mathbf{o}_t \quad (1)$$

and approximated by

$$\mathbf{c}_t \approx (\mathbf{r} - \rho^{-1}(\mathbf{r} - \vartheta)) \mathbf{o}_t. \quad (2)$$

and the saving rate is approximated in the last section.

For plausible values of the model parameters that satisfy the relevant impatience and human wealth conditions, make some plots examining the quality of those approximations. In particular, explore the relationship between the impatience conditions and the accuracy of the approximations, using [PerfForesightCRRA-Approximation](#).

2. Make some plots that illustrate the points made in sections 4.1 and 4.2 of [PerfForesightCRRA](#) about the size of the human wealth effect and the relationship between interest rates and the saving rate.