Household's Utility Function

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<u>Utility from services $c(t)$:</u>

$$\frac{\varepsilon}{\varepsilon-1} \cdot c(t)^{\frac{\varepsilon-1}{\varepsilon}} \qquad w/ \quad \varepsilon > 1$$

<u>Utility from real wealth.</u>

- Real wealth : real stock of government bonds
  $$\downarrow$$
  $$w(t)$$

- Average real wealth · $\bar{w}(t)$

- Relative real wealth · $[w(t) - \bar{w}(t)]$
  $$\downarrow$$
  enters utility function

- σ : $\mathbb{R} \rightarrow \mathbb{R}$, strictly increasing, strictly concave

$$\sigma (w(t) - \bar{w}(t))$$

<u>Aggregate utility.</u>

$\delta > 0$ time discount rate
serves   relative real wealth

$$\int_{0}^{} e^{-\delta t} \left[\frac{\varepsilon}{\varepsilon-1} c(t)^{\frac{\varepsilon-1}{\varepsilon}} + \sigma \left(w(t) - \bar{w}(t) \right) \right] dt$$