The Constant Relative Risk Aversion utility function is
\[ u(c) = \begin{cases} 
\frac{1}{1-\theta}c^{1-\theta} & \text{if } \theta > 0, \theta \neq 1 \\
\ln c & \text{if } \theta = 1
\end{cases} \]

Taking derivatives we find
\[ u'(c) = c^{-\theta} \]

Hence,
\[ \frac{u'(c_1)}{u'(c_2)} = \frac{c_1^{-\theta}}{c_2^{-\theta}} = \left( \frac{c_2}{c_1} \right)^{\theta} \]

or, solving for \( c_2/c_1 \):
\[ \frac{c_2}{c_1} = \left( \frac{u'(c_1)}{u'(c_2)} \right)^{1/\theta} \]

Here, \( \sigma = 1/\theta \) is the elasticity of the ratio between the consumed quantities of the two goods with respect to the marginal rate of substitution. By definition \( \sigma \) is then the elasticity of substitution, which is constant for the CRRA utility function. \( \sigma \) is a measure of the strength of the substitution effect that a change in relative prices induces. In the context of the Ramsey model a low \( \sigma \) means a strong preference for avoiding inequality between generations in excess of what follows from the discounting in the utility function.

The first order condition (Euler equation) in the Ramsey model was:
\[ \frac{u'(c_t)}{u'(c_{t+1})} = \beta[1 + f'(k_{t+1})] \]

With CRRA utility this becomes
\[ \left( \frac{c_{t+1}}{c_t} \right)^{\theta} = \beta[1 + f'(k_{t+1})] \]

which means that the consumption growth rate is
\[ \frac{c_{t+1}}{c_t} = \left[ \beta(1 + f'(k_{t+1})) \right]^{1/\theta} = \left( \frac{1 + f'(k_{t+1})}{1 + \rho} \right)^\sigma \]

A high \( \sigma \) means the difference between the marginal productivity of capital and the subjective discount rate has a strong effect on the consumption growth rate.