

Perfect Foresight Unconstrained problem:

Requirements: PF-FVC, FHW

$$\beta\Gamma^{1-\rho} < 1 \quad (1)$$

$$\mathbf{P}/R < 1 \quad (2)$$

$$\Gamma/R < 1 \quad (3)$$

PF-FVC

$$\mathbf{P}/\Gamma < (R/\Gamma)^{1/\rho} \quad (4)$$

FHW: $1 < (R/\Gamma)^{1/\rho} < (R/\Gamma)$

FHW

$$\Gamma/R < 1 \quad (5)$$

Q: Is it possible for GIC to fail?

Yes. Example:

$$\Gamma = 1.0 \quad (6)$$

$$R = 1.08 \quad (7)$$

$$\beta = 0.96 \quad (8)$$

$$\rho = 2 \quad (9)$$

$$\mathbf{P}/R < 1 < \mathbf{P}/\Gamma \quad (10)$$

$$R > \Gamma \quad (11)$$

$$\mathbf{P}/R < 1 < \mathbf{P}/\Gamma \quad (12)$$

$$R > \Gamma \text{ consistent with FHW} \quad (13)$$

$$(\beta R)^{1/\rho}/\Gamma < (R/\Gamma)^{1/\rho} \quad (14)$$

$$1 < (R/\Gamma)^{1/\rho} \text{from FHW} \quad (15)$$