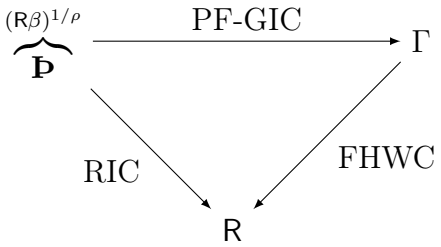

Figure 1 Name of diagram 1

0.1 Commutative Diagrams for the Perfect Foresight Model

The diagrams below illustrate the order of the several conditions in the text:

An arrow means "<", which indicates the annotated condition holds; if a condition is violated, the corresponding arrow is to be reversed.

For example, the topmost arrow, labeled PF-GIC, corresponds to the proposition that $\mathbf{Þ} < \Gamma$ – the definition of the PF-GIC. The rightmost arrow imposes $\Gamma < \mathsf{R}$ and the leftmost arrow imposes $\mathbf{Þ} < \mathsf{R}$. Traversing the diagram via the topmost arrow and then the rightmost arrow yields $\mathbf{Þ} < \Gamma < \mathsf{R}$ which implies that $\mathbf{Þ} < \mathsf{R}$, yielding the conclusion that the combination of the PF-GIC and FHWC conditions implies the RIC condition.

The diagram can be modified to incorporate the and to further incorporate the Perfect Foresight Finite Value of Autarky condition: and this tells us, for example, that we

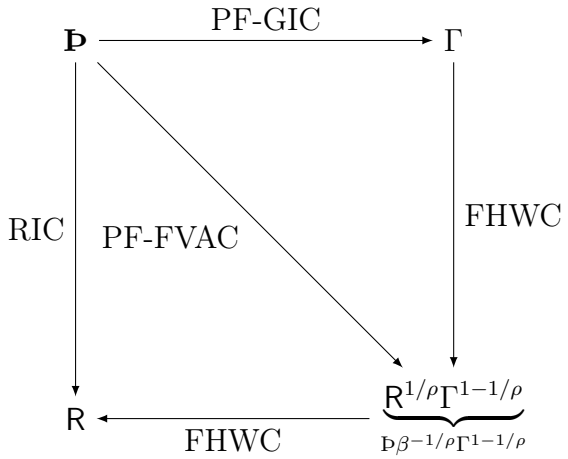

Figure 2 Name of diagram 2

can obtain the PF-FVAC either traversing the outer edge of the diagram in a clockwise direction (imposing first PF-GIC then FHWC), and with the bonus conclusion (bottom arrow, which reimposes the FHWC) that the RIC holds. Or we can take a shortcut, by imposing the directly (going down the diagonal), then imposing the FHWC, which together imply the RIC:

$$\begin{aligned}
\text{PF-FVAC}: \quad Þ &< Þ\beta^{-1/\rho}\Gamma^{1-1/\rho} && (1)\\
1 &< \beta^{-1/\rho}\Gamma^{1-1/\rho} && (2)\\
\text{FHWC}: \quad \Gamma &< \mathsf{R} && (3)
\end{aligned}$$

Alternatively, the counterclockwise trajectory says that we can obtain the PF-FVAC by imposing RIC and ~~FHWC~~. Finally, if we impose the PF-FVAC directly, the diagram tells us that this is consistent either with FHWC holding and the PF-GIC holding (clockwise trajectory), or the RIC holding but the FHWC failing (~~FHWC~~, counterclockwise trajectory).

$$\begin{aligned}
\text{RIC} \qquad (\mathsf{R}\beta)^{1/\rho} &< \mathsf{R} && (4)\\
\text{~~FHWC~~} \qquad \Gamma &> \mathsf{R} && (5)\\
(\mathsf{R}\beta)^{1/\rho} &< \mathsf{R} < \Gamma && (6)\\
(\mathsf{R}\beta)^{1/\rho}\Gamma &< \mathsf{R}/\Gamma < 1 && (7)\\
(\mathsf{R}/\Gamma)^{1/\rho}\beta^{1/\rho}\Gamma^{1-1/\rho} &< \mathsf{R}/\Gamma < 1 && (8)\\
& && (9)
\end{aligned}$$

), or (going counterclockwise) by imposing the RIC and the ~~FHWC~~ conditions.
by imposing RIC and ~~FHWC~~ or

$$\Gamma(\Gamma\beta)^{-1/\rho} < 1 \qquad (10)$$

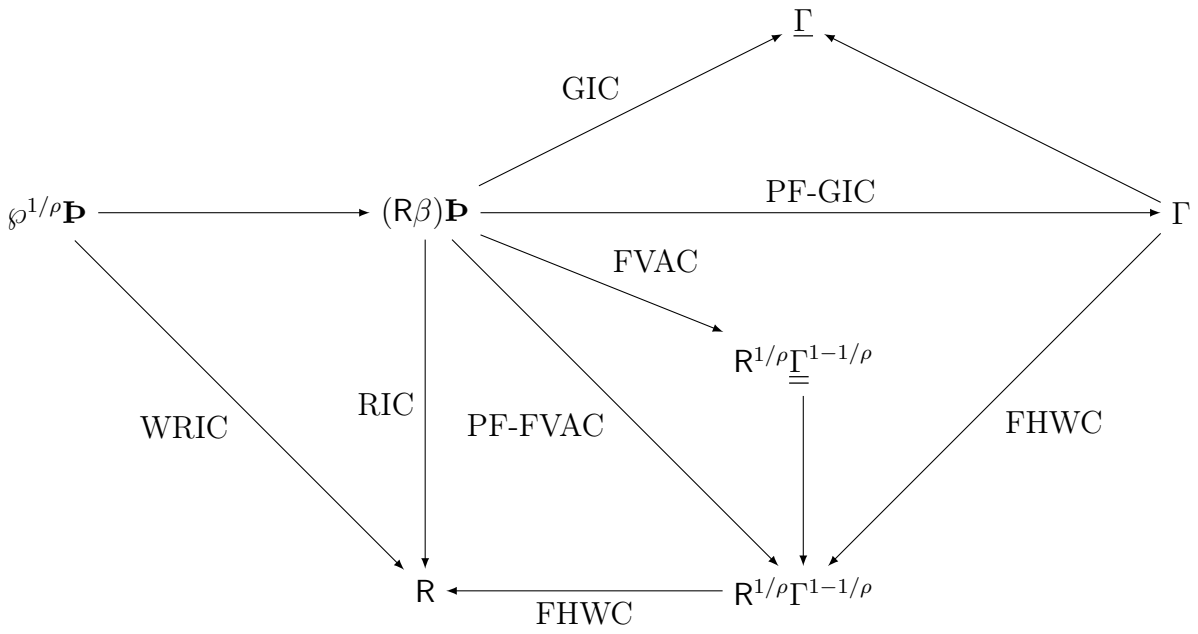

Figure 3 Name of diagram 3

$$\Gamma^{1-\rho}\beta < 1 \tag{11}$$

(12)

These diagrams also keep track of the hierarchy among the conditions. For example, if the right vertical arrow in the second diagram is reversed, then the top right triangle says PF-FVAC+ ~~FHWC~~ implies PF-GIC. If the left vertical arrow is reversed, then ~~RIC~~ + PF-GIC implies ~~FHWC~~.