Demostraciones

y_{eq}

$$\pi = \bar{\pi} + \frac{(a_1+a_2)\alpha(r^* - r_{t-1}) + a_0(g-\bar{g}) + a_2(e^e - \bar{e}) + a_3(y^* - \bar{y}^*) + a_4}{b_0(a_1+a_2)} - \frac{[1+b_1(a_1+a_2)](y-\bar{y})}{b_0(a_1+a_2)}, \quad (24)$$

$$\pi = \pi^e + \phi_0(y - \bar{y}) + \phi_1, \quad (25)$$

$$\pi^e + \phi_0(y - \bar{y}) + \phi_1 = \bar{\pi} + \frac{(a_1+a_2)\alpha(r^* - r_{t-1}) + a_0(g-\bar{g}) + a_2(e^e - \bar{e}) + a_3(y^* - \bar{y}^*) + a_4}{b_0(a_1+a_2)} - \frac{[1+b_1(a_1+a_2)](y-\bar{y})}{b_0(a_1+a_2)}$$

$$\left(\phi_0 + \frac{1+b_1(a_1+a_2)}{b_0(a_1+a_2)}\right)(y-\bar{y}) = \bar{\pi} + \frac{(a_1+a_2)\alpha(r^* - r_{t-1}) + a_0(g-\bar{g}) + a_2(e^e - \bar{e}) + a_3(y^* - \bar{y}^*) + a_4}{b_0(a_1+a_2)} - \phi_1 - \pi^e$$

$$\left(\frac{\phi_0 b_0(a_1+a_2) + 1 + b_1(a_1+a_2)}{b_0(a_1+a_2)}\right)(y-\bar{y}) = \bar{\pi} + \frac{(a_1+a_2)\alpha(r^* - r_{t-1}) + a_0(g-\bar{g}) + a_2(e^e - \bar{e}) + a_3(y^* - \bar{y}^*) + a_4}{b_0(a_1+a_2)} - \phi_1 - \pi^e$$

$$y - \bar{y} = \frac{\frac{\bar{\pi}b_0(a_1+a_2) + (a_1+a_2)\alpha(r^* - r_{t-1}) + a_0(g-\bar{g}) + a_2(e^e - \bar{e}) + a_3(y^* - \bar{y}^*) + a_4 - (\phi_1 + \pi^e)(a_1+a_2)b_0}{b_0(a_1+a_2)}}{\frac{\phi_0 b_0(a_1+a_2) + 1 + b_1(a_1+a_2)}{b_0(a_1+a_2)}}$$

$$y_{eq} = \bar{y} + \frac{\bar{\pi}b_0(a_1+a_2) + (a_1+a_2)\alpha(r^* - r_{t-1}) + a_0(g-\bar{g}) + a_2(e^e - \bar{e}) + a_3(y^* - \bar{y}^*) + a_4 - (\phi_1 + \pi^e)(a_1+a_2)b_0}{1 + (\phi_0 b_0 + b_1)(a_1+a_2)}$$

π_{eq}

$$y = \bar{y} + \frac{(a_1+a_2)\alpha(r^* - r_{t-1}) + a_0(g-\bar{g}) + a_2(e^e - \bar{e}) + a_3(y^* - \bar{y}^*) + a_4}{1 + b_1(a_1+a_2)} - \frac{b_0(a_1+a_2)(\pi - \bar{\pi})}{1 + b_1(a_1+a_2)}, \quad (23)$$

De (25),

$$y - \bar{y} = \frac{\pi - \pi^e - \phi_1}{\phi_0}$$

$$\frac{\pi - \pi^e - \phi_1}{\phi_0} = \frac{(a_1 + a_2)\alpha(r^* - r_{t-1}) + a_0(g - \bar{g}) + a_2(e^e - \bar{e}) + a_3(y^* - \bar{y}^*) + a_4}{1 + b_1(a_1 + a_2)} - \frac{b_0(a_1 + a_2)(\pi - \bar{\pi})}{1 + b_1(a_1 + a_2)}$$

$$\left(\frac{1}{\phi_0} + \frac{b_0(a_1 + a_2)}{1 + b_1(a_1 + a_2)}\right)\pi = \frac{\pi^e + \phi_1}{\phi_0} + \frac{(a_1 + a_2)\alpha(r^* - r_{t-1}) + a_0(g - \bar{g}) + a_2(e^e - \bar{e}) + a_3(y^* - \bar{y}^*) + a_4 + b_0(a_1 + a_2)\bar{\pi}}{1 + b_1(a_1 + a_2)}$$

$$\left(\frac{1 + b_1(a_1 + a_2) + \phi_0 b_0(a_1 + a_2)}{\phi_0[1 + b_1(a_1 + a_2)]}\right)\pi$$
$$= \frac{(\pi^e + \phi_1)[1 + b_1(a_1 + a_2)] + \{(a_1 + a_2)\alpha(r^* - r_{t-1}) + a_0(g - \bar{g}) + a_2(e^e - \bar{e}) + a_3(y^* - \bar{y}^*) + a_4 + b_0(a_1 + a_2)\bar{\pi}\}\phi_0}{\phi_0[1 + b_1(a_1 + a_2)]}$$

$$\pi_{eq} = \frac{(\pi^e + \phi_1)[1 + b_1(a_1 + a_2)] + \{(a_1 + a_2)\alpha(r^* - r_{t-1}) + a_0(g - \bar{g}) + a_2(e^e - \bar{e}) + a_3(y^* - \bar{y}^*) + a_4 + b_0(a_1 + a_2)\bar{\pi}\}\phi_0}{1 + b_1(a_1 + a_2) + \phi_0 b_0(a_1 + a_2)}$$

$$\pi_{eq} = \frac{(\pi^e + \phi_1)[1 + b_1(a_1 + a_2)] + \{(a_1 + a_2)\alpha(r^* - r_{t-1}) + a_0(g - \bar{g}\,) + a_2(e^e - \bar{e}) + a_3(y^* - \bar{y}^*) + a_4 + b_0(a_1 + a_2)\bar{\pi}\}\phi_0}{1 + (b_1 + \phi_0 b_0)(a_1 + a_2)}$$