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[Notes 8]
On equation (2.13')

Q About the derivation of equation (2.13'). Using equation (2.9) and (2.6), I get

$$i_t = \frac{a_1}{a_4}\pi_t - \frac{1}{a_4}\pi^* + \frac{a_2}{a_4}y_t,$$

so π_t and π^* does not have the same coefficient. Yet, in equation (2.13') they do. Why?

A In (2.13'), they do *not* have the same coefficient. The equation is

$$i_t = \pi_t + b_1\left(\pi_t - \pi^*\right) + b_2 y_t, \qquad (2.13')$$

or,

$$i_t = \left(1 + b_1\right)\pi_t - b_1\pi^* + b y_t.$$

So, the question is whether

$$\frac{a_1}{a_4} = 1 + b_1,$$
$$\frac{1}{a_4} = b_1,$$

holds. To check this, note that

$$a_1 \equiv 1 + \alpha_1\beta_2,$$
$$a_4 \equiv \alpha_1\beta_2,$$

by (2.6'). It thus follows that as $b_1 \equiv 1/\left(\alpha_1\beta_2\right)$ equation (2.13') is correct, and consistent with the solution for i_t shown in the question.