

$$(2) \quad P_{ity} = a_i Q_{ty} - b_{ity} E_{ty}^2$$

$$(3) \quad b_{ity} \begin{cases} \frac{a_t}{2E_{ty}} & \text{when } i = 0 \\ \frac{a_t q_t}{2} & \text{when } i = 1 \end{cases}$$