

$$P_0 \left[\frac{i_o}{n_o} \middle| \frac{i_c}{n_c} \right] = \left(1 - \frac{n_c - 1}{N} \right) \frac{n_c - i_c}{n_c} \sum_{t=0}^{t_{max}} P_{f,t} \left[\frac{i_o}{n_o - 1} \middle| \frac{i_c}{n_c - 1} \right] (A)$$

$$+ \left(1 - \frac{n_c - 1}{N} \right) \frac{i_c}{n_c} (1 - s) \sum_{t=0}^{t_{max}} P_{f,t} \left[\frac{i_o - 1}{n_o - 1} \middle| \frac{i_c - 1}{n_c - 1} \right] (B)$$

$$+ \frac{i_c}{N} (1 - s) \sum_{t=0}^{t_{max}} P_{f,t} \left[\frac{i_o - 1}{n_o - 1} \middle| \frac{i_c}{n_c} \right] (C)$$

$$+ \frac{n_c - i_c}{N} \sum_{t=0}^{t_{max}} P_{f,t} \left[\frac{i_o}{n_o - 1} \middle| \frac{i_c}{n_c} \right] (D)$$

$$+ \left(1 - \frac{n_c - 1}{N} \right) \frac{i_c}{n_c} s P_{f,t_{max}} \left[\frac{i_o - 1}{n_o - 1} \middle| \frac{i_c - 1}{n_c - 1} \right] (sB)$$

$$+ \frac{i_c}{N} s P_{f,t_{max}} \left[\frac{i_o - 1}{n_o - 1} \middle| \frac{i_c}{n_c} \right] (sC)$$

$$P_{f,t} \left[\frac{i_o}{n_o} \middle| \frac{i_c}{n_c} \right] = \left(1 - \frac{n_c - 1}{N} \right) \frac{i_c}{n_c} s P_{f,t-1} \left[\frac{i_o}{n_o} \middle| \frac{i_c - 1}{n_c - 1} \right] (sB)$$

$$+ \frac{i_c}{N} s P_{f,t-1} \left[\frac{i_o}{n_o} \middle| \frac{i_c}{n_c} \right] (sC)$$

$$P_{f,t=0} = P_{0,t_{max}} \left[\frac{i_o}{n_o} \middle| \frac{i_c}{n_c} \right]$$