Firms Problem with CES Production and Ownership of Capital

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Firm i's maximization problem is:

$$V_{i}(k_{it}, \Omega_{t}) = \max_{k_{i,t+1}, n_{it}} \left[p_{it} f(z_{t}, k_{it}, n_{it}) - w_{t} n_{it} + (1 - \delta) k_{it} - k_{i,t+1} \right] + \frac{1}{1 + r_{t+1}} V_{i}(k_{i,t+1}, \Omega_{t+1});$$

$$f(z_{t}, k_{it}, n_{it}) = z_{t} \left[\alpha k_{it}^{\eta} + (1 - \alpha) n_{it}^{\eta} \right]^{\frac{1}{\eta}}$$

$$(1)$$