$$V_l(j) \equiv U(l') - m_{l,l'}$$

$$P_l(l') = \frac{\exp\left(V_l(l')\right)}{\sum_{k=1}^{L} \exp\left(V_l(k)\right)}$$

$$j \equiv \arg \max_{l \in 1,\ldots,L} \left[\left(U(l') - m_{l,l'} + \epsilon \right) \right]$$

$$w(l,p) = \begin{cases} w(l) & \text{if } w(l) \le py \\ \varnothing & \text{if } w(l) > py \end{cases}$$

$$W(l,p) = w(l,p) - c_l - r_l + \frac{\delta}{1+r} U(l) + \frac{1-\delta}{1+r} W(l,p)$$

$$w(l) = b(l) + (1-\mu) c_l + \frac{1-\lambda_l}{1+r} E_\epsilon \max_{l' \in 1,\ldots,L} \left[U(l') - U(l) - m_{l,l'} + \epsilon \right]$$

$$U(l) = b(l) - \mu c_l - r_l + \frac{\lambda_l}{1+r} U(l) + \frac{1-\lambda_l}{1+r} \left[\gamma + \log\left(\sum_{l'=1}^{L} \exp\{U(l') - m_{l,l'}\} \right) \right]$$

$$U(l) = b(l) - \mu c_l - r_l + \frac{1}{1+r} \lambda_l U(l) + \frac{1}{1+r} (1-\lambda_l) E_\epsilon \max_{l' \in 1,\ldots,L} \left[\left(U(l') - m_{l,l'} + \epsilon \right) \right]$$

$$u_{t+1}(l) = \delta\left(1 - u_t(l)\right) + \lambda_l u_t(l) \left(1 - 2\Phi\left(\frac{w(l) - \mu_p}{\sigma_p}\right)\right) - \left(1 - \lambda_l\right) u_t(l) \left[\left(\sum_{k=1; k \neq l}^{L} P_l(k) \right) - P_l(l) \right]$$
$$+ \sum_{k=1; k \neq l}^{L} \left(1 - \lambda_k\right) P_k(l) u_t(k)$$