Households

$$\max_{c,h} u(c,\ell)$$

$$\text{s.t} \quad c = ((1-s_M)w_Y + s_M w_M)h + rk + \tilde{\pi}$$

$$1 - h = \int_0^M \ell_\iota \mathrm{d}\iota$$

Consumption

$$Y = \int_0^A \left(\left(\frac{b_i}{\bar{b}} \right)^{\chi\Omega} x_i \right)^{\alpha} L_y^{1-\alpha} \mathrm{d}i$$

$$\bar{b} = \frac{1}{A} \int_0^A b_t \mathrm{d}i$$

Leisure

$$\ell = \left(\int_0^M \ell_\iota^{\frac{1}{1+\zeta}} \mathrm{d}\iota \right)^{1+\zeta}$$

Final Good

$$\max_{x_i} p_i x_i - rk - p_B b_i$$

Intermediate Market

$$\max_{L_{M_j}, N_j} p_B B_j - w_M L_{M_j}$$

$$\text{s.t} \quad \ell_j = B_j = N_j \frac{L_{M_j}}{M} \ell$$