

1 Banks

Balance sheet - SAME

$$q_t^S b_t^E + q_t^G b_t^G + re_t = k_t^S + d_t^S \quad (1)$$

Net worth - SAME

$$k_t^S = \sigma^S \Pi_{t+1}^{-1} [(r_t^E - r_{t-1}^D) q_t^S b_t^E + (r_t^G - r_{t-1}^D) q_t^G b_t^G + (r_{t-1}^{re} - r_{t-1}^D) re_t + (1 + r_{t-1}^D) k_{t-1}^S] + X \quad (2)$$

Equilibrium conditions - BINDING CONSTRAINT:

$$\Lambda_{t,t+1} \Omega_{t+1} \Pi_{t+1}^{-1} (r_{t+1}^E - r_t^D) = \theta^S \frac{\lambda_t^S}{1 + \lambda_t^S} \quad (3)$$

$$\Lambda_{t,t+1} \Omega_{t+1} \Pi_{t+1}^{-1} (r_{t+1}^G - r_t^D) = \Delta^S \theta^S \frac{\lambda_t^S}{1 + \lambda_t^S} \quad (4)$$

Equilibrium conditions - NON BINDING CONSTRAINT:

$$\Lambda_{t,t+1} \Omega_{t+1} \Pi_{t+1}^{-1} (r_{t+1}^E - r_t^D) = 0 \quad (5)$$

$$\Lambda_{t,t+1} \Omega_{t+1} \Pi_{t+1}^{-1} (r_{t+1}^G - r_t^D) = 0 \quad (6)$$

Omega - SAME:

$$\Omega_t = 1 - \sigma^S + \sigma^S \theta^S \phi_t^S \quad (7)$$

Leverage - BINDING CONSTRAINT:

$$\phi_t^S = \frac{(1 + \lambda_t^S) \Lambda_{t,t+1} \Omega_{t+1} \Pi_{t+1}^{-1} (1 + r_t^D)}{\theta^S} \quad (8)$$

Leverage - NON BINDING CONSTRAINT:

$$\phi_t^S = \frac{\Lambda_{t,t+1} \Omega_{t+1} \Pi_{t+1}^{-1} (1 + r_t^D)}{\theta^S} \quad (9)$$

Leverage constraint - BINDING CONSTRAINT:

$$q_t^S b_t^E + \Delta^S q_t^G b_t^G = \phi_t^S k_t^S \quad (10)$$

Leverage constraint - NON BINDING CONSTRAINT:

$$\lambda_t^S = 0 \quad (11)$$