$$T = \frac{N}{p_H} d'_b \left[b + (1-b)\eta \right]$$

$$\eta^\star = \frac{d_r + d_p}{d_b}$$

$$d'_b = d_b \left[\frac{b+(1-b)\eta^\star}{b+(1-b)\eta} \right] \frac{T}{T^\star}$$

$$\eta^\star = t^\star_s / t^\star_b$$

$$d'_r - d_r = \eta d'_b - \eta^\star d_b$$