

$$E = \frac{1}{\sigma_{-N}^2} E_{-I} + \sum_j \frac{\alpha_j^2}{\sigma_{-S_j}^2} + \sum_j \frac{\beta_j^2}{\sigma_{-T_j}^2} + \sum_j \frac{(\rho_j - \bar{\rho}_j)^2}{\sigma_{-\rho_j}^2}$$

where

$$\sigma_{-N} \in \mathbb{R}$$

$$E_{-I} \in \mathbb{R}$$

$$\alpha_i \in \mathbb{R}$$

$$\beta_i \in \mathbb{R}$$

$$\sigma_{-S_i} \in \mathbb{R}$$

$$\sigma_{-T_i} \in \mathbb{R}$$

$$\rho_j \in \mathbb{R}$$

$$\bar{\rho}_j \in \mathbb{R}$$

$$\sigma_{-\rho_j} \in \mathbb{R}$$