

$$\mathbb{E}\left[\int_{s_t^1}^{s_t^2} f\left(y_1, \bar{c}^1\right) d\kappa\right] \geq 0 \geq \mathbb{E}\left[\int_{s_t^1}^{s_t^2} f\left(y_2, \bar{c}^2\right) d\kappa\right] .$$