

作業六

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① When $F_0 < (S_0 - I)e^{rT}$.

long forward ($K = F_0$), short underlying asset, loan S_0 .

$$\begin{aligned} & +S_T - F_0 - S_T - Ie^{rT} + S_0e^{rT} \\ & = -F_0 + (S_0 - I)e^{rT} > 0 \end{aligned}$$

② show $F_0 = S_0e^{(r-q)T}$

$$\begin{aligned} f &= Se^{-qT} - Xe^{-rT} \\ \downarrow & \quad \quad \downarrow \\ \Rightarrow F &= Se^{-qT} - Se^{-rT} = Se^{(-q+r)T} \end{aligned}$$