

Monthly bonuses for a weather forecaster

- ▶ Before the first of the month assign one dollar to the forecaster's bonus. $b_0 = 1$
- ▶ Forecaster assigns probability p_t to rain on day t .
- ▶ If it rains on day t then $b_t = 2b_{t-1}p_t$
- ▶ If it does not rain on day t then $b_t = 2b_{t-1}(1 - p_t)$
- ▶ At the end of the month, give forecaster b_T
- ▶ Risk averse strategy: Setting $p_t = 1/2$ for all days, guarantees $b_T = 1$
- ▶ High risk prediction: Setting $p_t \in \{0, 1\}$ results in Bonus $b_T = 2^T$ if always correct, zero otherwise.