26.10.23

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Stochastic Optimization problems

1. a. *Any variable indexed by t is allowed to "see" any of the outcomes of our exogenous process* $W_1, \ldots, W_t$ *, but is not allowed to see* W_{t+1}.
   b. At time t.
2. p_t is the price at time t, $p_t(\omega)$ is price of a sample path ω at time t.
3. No. It must either be 0 or 1.
4. It's independent. Decision xt can "see" Wt but not Wt+1.
5. $\hat{F}(\omega^{n=1})$ = \$42.67
   $\hat{F}(\omega^{n=2})$ = \$43.15
   $\hat{F}(\omega^{n=3})$ = \$43.17
   $\hat{F}(\omega^{n=4})$ = \$43.77
   $\hat{F}(\omega^{n=5})$ = \$41.53
   $\hat{F}(\omega^{n=6})$ = \$43.77
   $\hat{F}(\omega^{n=7})$ = \$43.67
   $\hat{F}(\omega^{n=8})$ = \$43.68
   $\hat{F}(\omega^{n=9})$ = \$43.16
   $\hat{F}(\omega^{n=10})$ = \$42.08

   $\bar{F}^{\pi}$ = \$43.065
   $(\hat{\sigma}^{\pi})^2 = \frac{1}{9}\sum_{n=1}^{10}\left(\hat{F}^{\pi}(\omega^n) - \bar{F}^{\pi}\right)^2$ = 0.583117