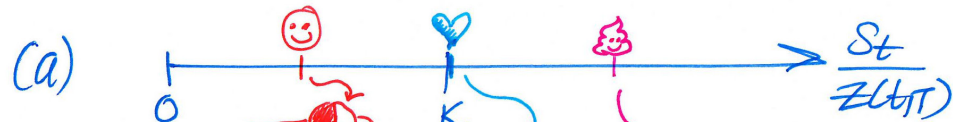


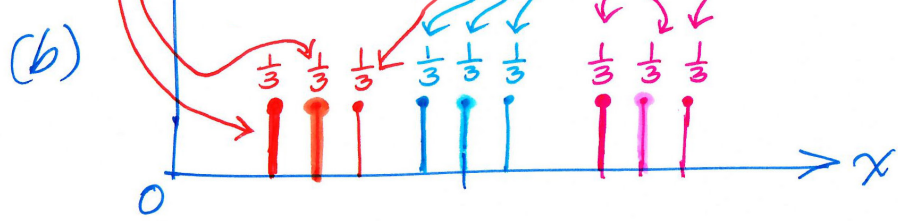
Qualitative estimation of risk-neutral price as a function of present asset value



Numeraire: $Z(t, T)$

FTAP:

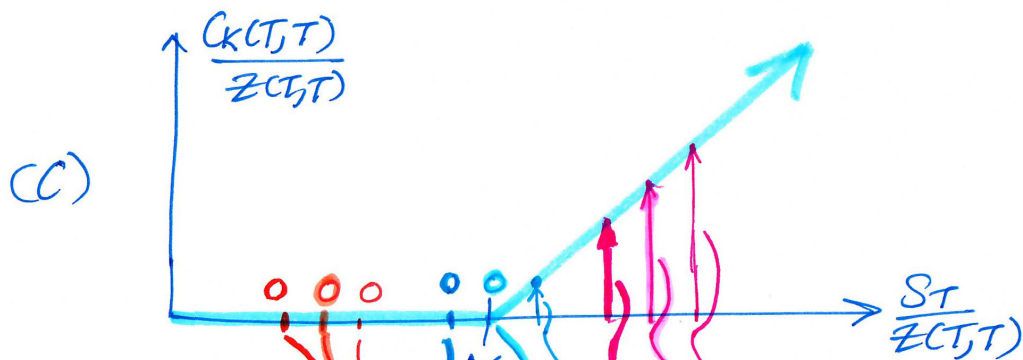
$$\frac{S_t}{Z(t, T)} = \mathbb{E}_* \left[\frac{S_T}{Z(T, T)} \middle| S_t \right]$$



Consider derivative contract with payout at T

$$C_K(T, T) = (S_T - K)^+$$

(the derivative is called a "European call option with strike K on asset with value S_T at time T)



$$\frac{C_K(t, T)}{Z(t, T)} = \mathbb{E}_* \left[\frac{C_K(T, T)}{Z(T, T)} \middle| S_t \right]$$

