Exam #1 Formula Sheet

Discount Factors:

	effective rate R	nominal rate $r[m]$	nominal rate $r[\infty]$
D(T)	$\frac{1}{(1+R)^T}$	$\frac{1}{\left(1+\frac{r[m]}{m}\right)^{mT}}$	$\frac{1}{e^{Tr[\infty]}} = e^{-Tr[\infty]}$

Forward price of a stock that pays no dividends

$$\mathcal{F} = S_0(1+R)^T$$

Forward Exchange rates:

$$\mathcal{F}^{\mathcal{B}}_{\mathcal{A}} = \frac{1+r_A}{1+r_B}E^B_A.$$

Put payoff at maturity T:

$$P_T = (K - S_T)^+.$$

Call payoff at maturity T:

$$C_T = (S_T - K)^+.$$

No-arbitrage price of a fixed-income security

$$\mathcal{P} = \sum_{i=1}^{N} F_i D(T_i) = \sum_{i=1}^{N} \frac{F_i}{(1+R_*(T_i))^{T_i}}$$