

model X_1, X_2, \dots, X_n uafhængige

$$E[X_i] = \mu_i, V[X_i] = \sigma_i^2.$$

$$Y = c_1 X_1 + \dots + c_n X_n = \sum_{i=1}^n c_i X_i = \sum_{i=1}^n c_i \cdot \mu_i$$

$$\text{IF } X, Y \text{ uafhængige } \left\{ \begin{aligned} V[Y] &= \sum_{i=1}^n c_i^2 \cdot V[X_i] = \\ &= \sum_{i=1}^n c_i^2 \cdot \sigma_i^2 \end{aligned} \right\}$$

$$\text{Else } \left\{ V[Y] = \sum_{i=1}^n c_i^2 \sigma_i^2 + \sum_{i=1}^n \sum_{j=1}^n c_i c_j \cdot \text{cov}(X_i, X_j) \right\}$$

