

### Example 3.5

- A signed measure  $\mu$  on  $\mathcal{F}_2$  is completely specified by the values on the atoms

$$\mu(\tilde{X}_1 \cap \tilde{X}_2), \quad \mu(\tilde{X}_1^c \cap \tilde{X}_2), \quad \mu(\tilde{X}_1 \cap \tilde{X}_2^c), \quad \mu(\tilde{X}_1^c \cap \tilde{X}_2^c)$$

- The value of  $\mu$  on other sets in  $\mathcal{F}_2$  are obtained by set-additivity. For example,

$$\begin{aligned} \mu(\tilde{X}_1) &= \mu((\tilde{X}_1 \cap \tilde{X}_2) \cup (\tilde{X}_1 \cap \tilde{X}_2^c)) \\ &= \mu(\tilde{X}_1 \cap \tilde{X}_2) + \mu(\tilde{X}_1 \cap \tilde{X}_2^c) \end{aligned}$$