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Three dimensions of model risk:

- **Parameter Risk**
  - Parameters ($\alpha_x^{(g)}$, $\beta_x^{(g)}$, $\kappa_t^{(g)}$, etc.) must be estimated, resulting in sampling inaccuracy.

- **Misspecification Risk**
  - Choice of model might be wrong.

- **Identification Risk**
  - Even if a model represents the past well and accurately, future might be different from past, i.e., past might not be representative for the future.

Process risk refers to the risk that the process evolves different than expected (e.g., generating too many paths outside the 95% confidence intervals).

$$\kappa_{T+t}^{(g)} = \kappa_T^{(g)} + t \times c^{(g)} + \left(\delta_{T+1}^{(g)} + \cdots + \delta_{T+t}^{(g)}\right) \sim N\left(\kappa_T^{(g)} + t \times c^{(g)}, t \times \left(\sigma_\delta^{(g)}\right)^2\right)$$

$$\kappa_{T+t}^{(g)} = \kappa_T^{(g)} + t \times c^{(g)} + \left(\delta_{T+1}^{(g)} + \cdots + \delta_{T+t}^{(g)}\right) \sim N\left(\kappa_T^{(g)} + t \times c^{(g)}, t \times \left(\sigma_\delta^{(g)}\right)^2\right)$$