Posterior Predictive Check
Model-predicted lines should resemble observed data line

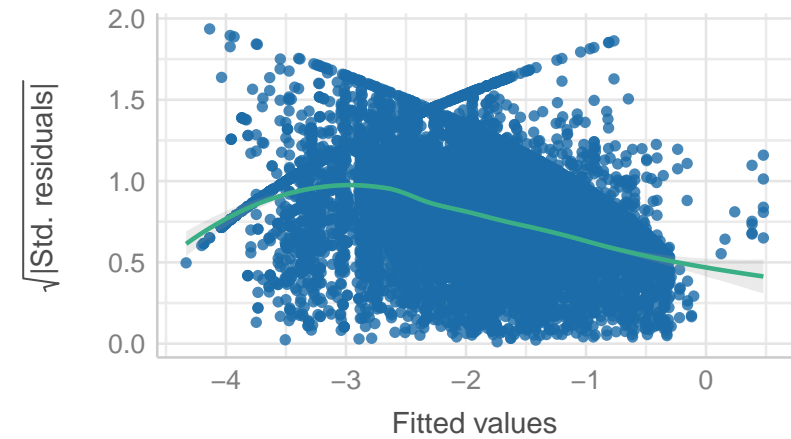— Observed data — Model-predicted data
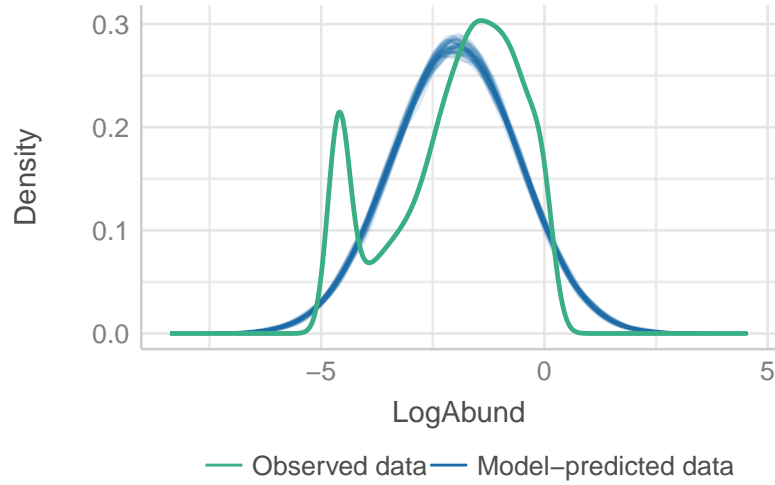
Linearity
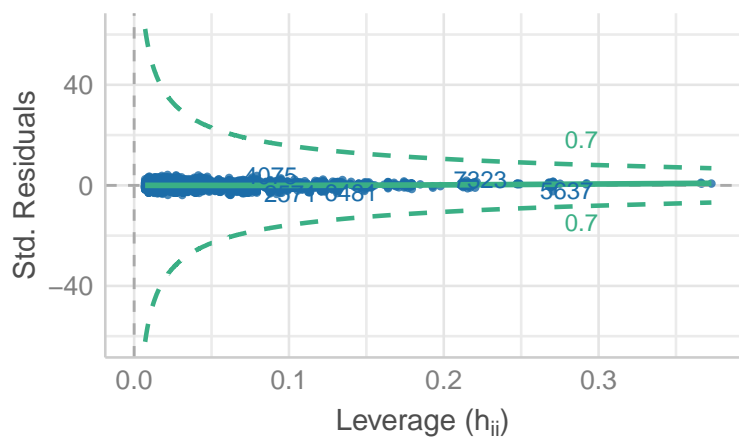Reference line should be flat and horizontal
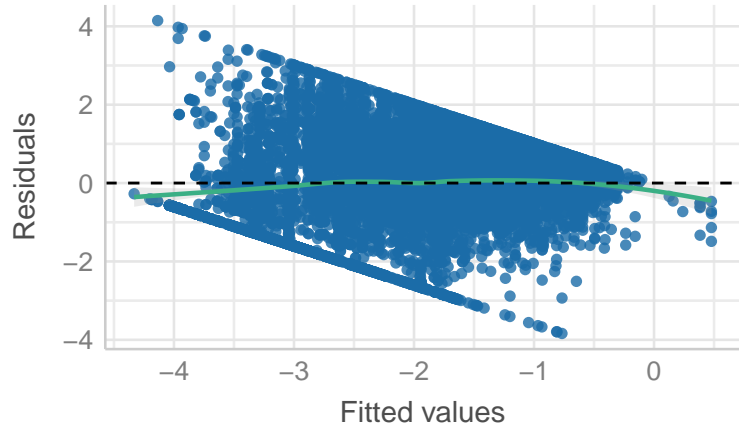
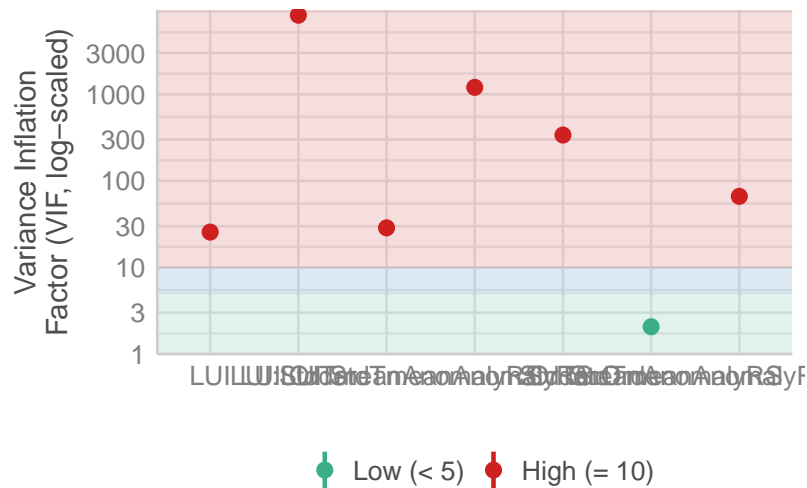## Homogeneity of Variance
Reference line should be flat and horizontal

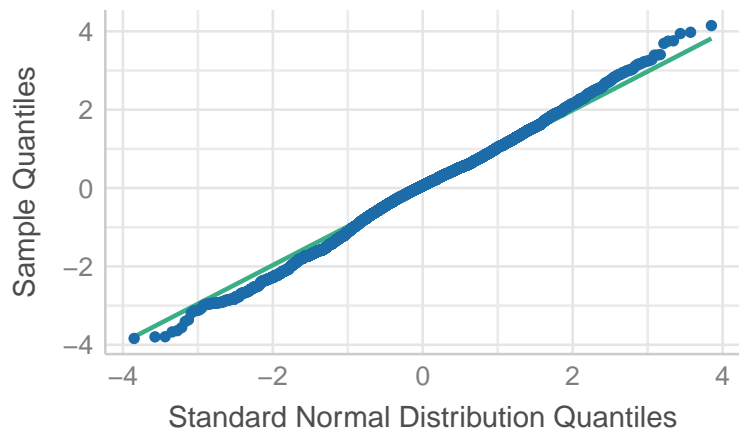## Influential Observations
Points should be inside the contour lines

Collinearity
High collinearity (VIF) may inflate parameter uncertainty
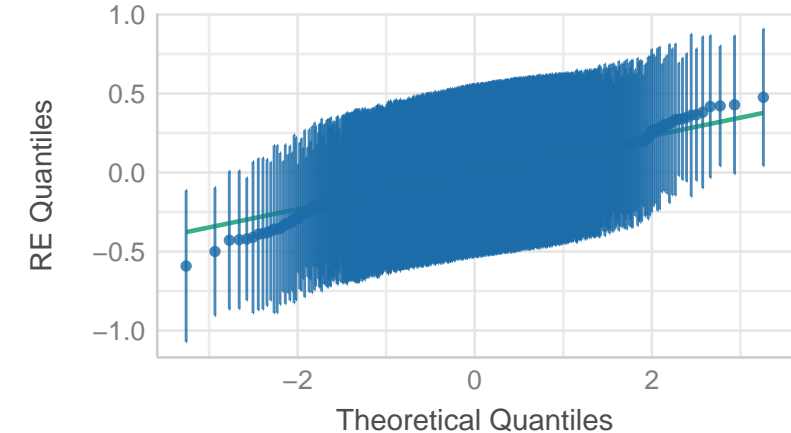
Low (< 5)   High (= 10)

Normality of Residuals
Dots should fall along the line

Normality of Random Effects (SSB)
Dots should be plotted along the line

Normality of Random Effects (SS)
Dots should be plotted along the line