

- **Mean squared error (MSE)**

$$\bar{L} = \frac{\sum_{j=0}^{T-h-t} e_{t+j,h}^2}{T-h-t+1} \equiv MSE$$

which is the sample average loss corresponding to a symmetric quadratic loss function. It is also customary to report the root mean squared error (i.e.,  $RMSE = \sqrt{MSE}$ ).

- **Mean absolute error (MAE)**

$$\bar{L} = \frac{\sum_{j=0}^{T-h-t} |e_{t+j,h}|}{T-h-t+1} \equiv MAE$$

which is the sample average loss corresponding to an absolute value loss function.

- **Mean absolute percentage error (MAPE)**

$$\bar{L} = \frac{\sum_{j=0}^{T-h-t} \left| \frac{e_{t+j,h}}{y_{t+j+h}} \right|}{T-h-t+1} \equiv MAPE$$

which is the mean absolute error reported in percentage terms over the realized values.