



basic model,  $y_n$ =cumulative cases;  $a=0.71$ ,  $b=0.756$ ,  $q=7$ ;  $\|y^*-y\|_{\text{train}}=5093$ ;  $\|y^*-y\|_{\text{test}}=34386$



HoltWinters algorithm,  $\|y^*-y\|_{\text{train}}=3209$ ,  $\|y^*-y\|_{\text{test}}=18774$



periodic model,  $y_n$ =cumulative cases;  $a=0.71$ ,  $b=0.756$ ,  $q=7$ ;  $\|y^*-y\|_{\text{train}}=5119$ ;  $\|y^*-y\|_{\text{test}}=26857$ ;  $c_1=0.15$ ,  $p_1=4$ ,  $n_1=2$ ,  $c_2=0.1$ ,  $p_2=4$ ,  $n_2=2$



Italy,  $y_n^*$ =cumulative cases, test set: from 03.01.2021 to 04.01.2021



Italy,  $y_n^*$ =cumulative cases, actual till 02.01.2021 to 16.02.2021



HW 95% Prediction Interval

