Design 1 and 2

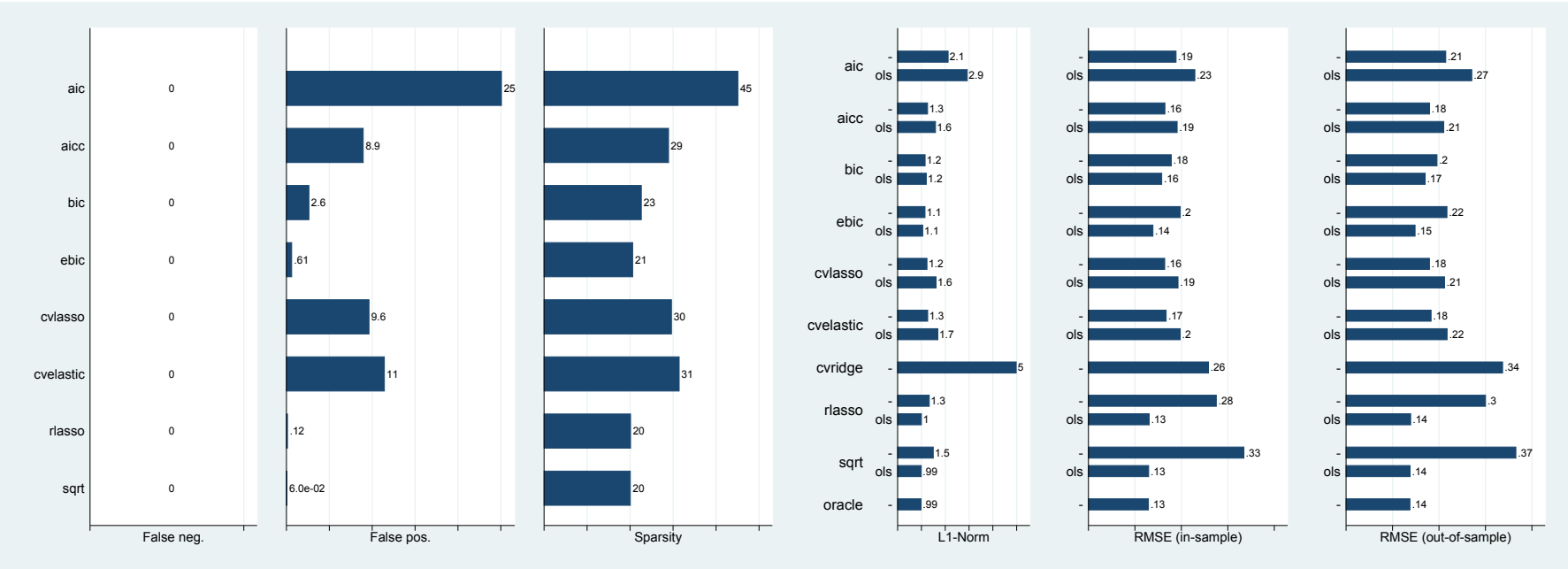
$$y_i = 1 + \sum_{j=1}^{p} \beta_j x_{ij} + \varepsilon_i, \varepsilon_i \sim N(0, \sigma^2) \tag{1}$$

$p = 100, \sigma = \{0.5, 1, 2, 3, 5\}, cor(x_j, x_s) = \theta^{|j-s|}$

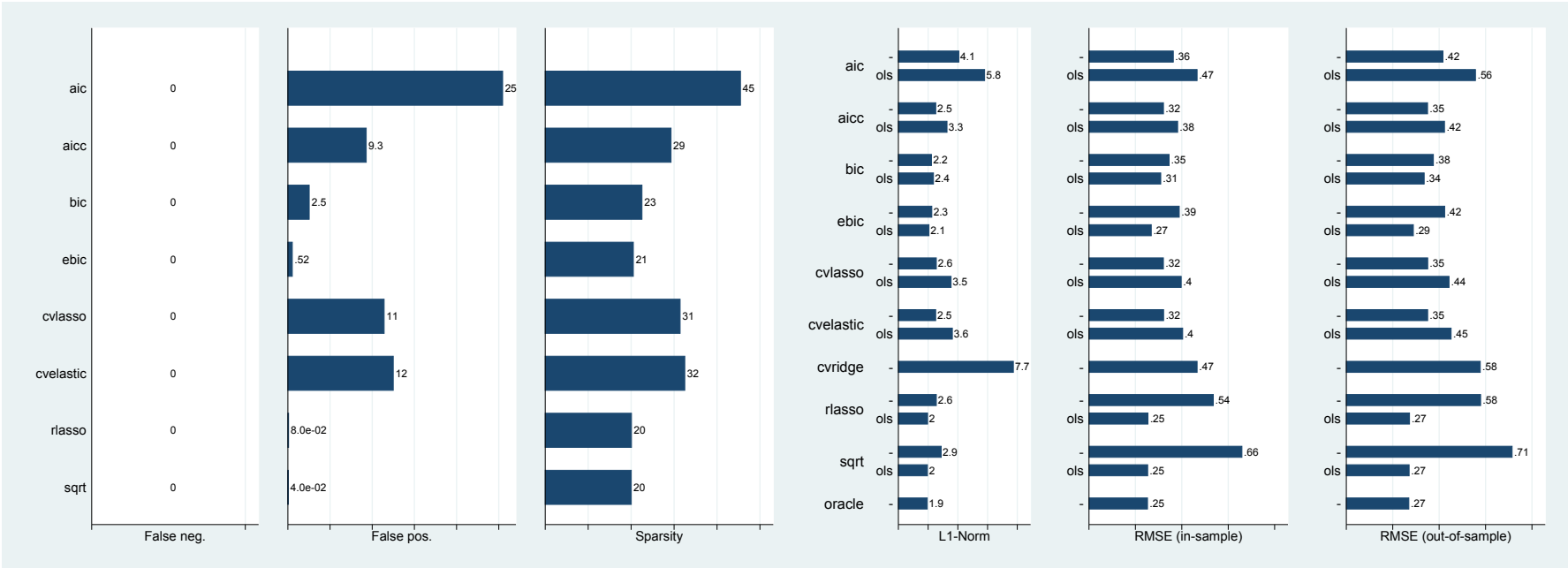
Estimation sample: 200. Validation sample: 200.

Design 1: $\beta_j = 1\{j \leq 20\}, s = 20$.
Design 2: $\beta_j = (0.5)^j$.

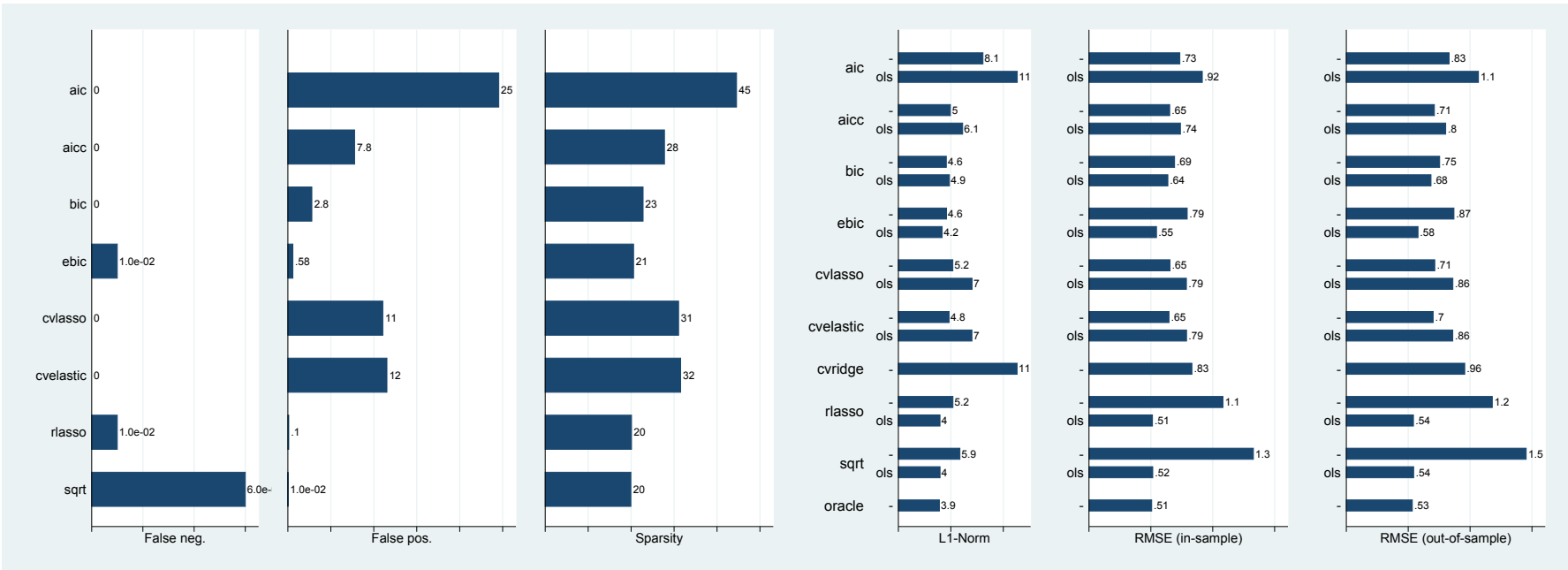
Design 1, sigma=.5, theta=.7



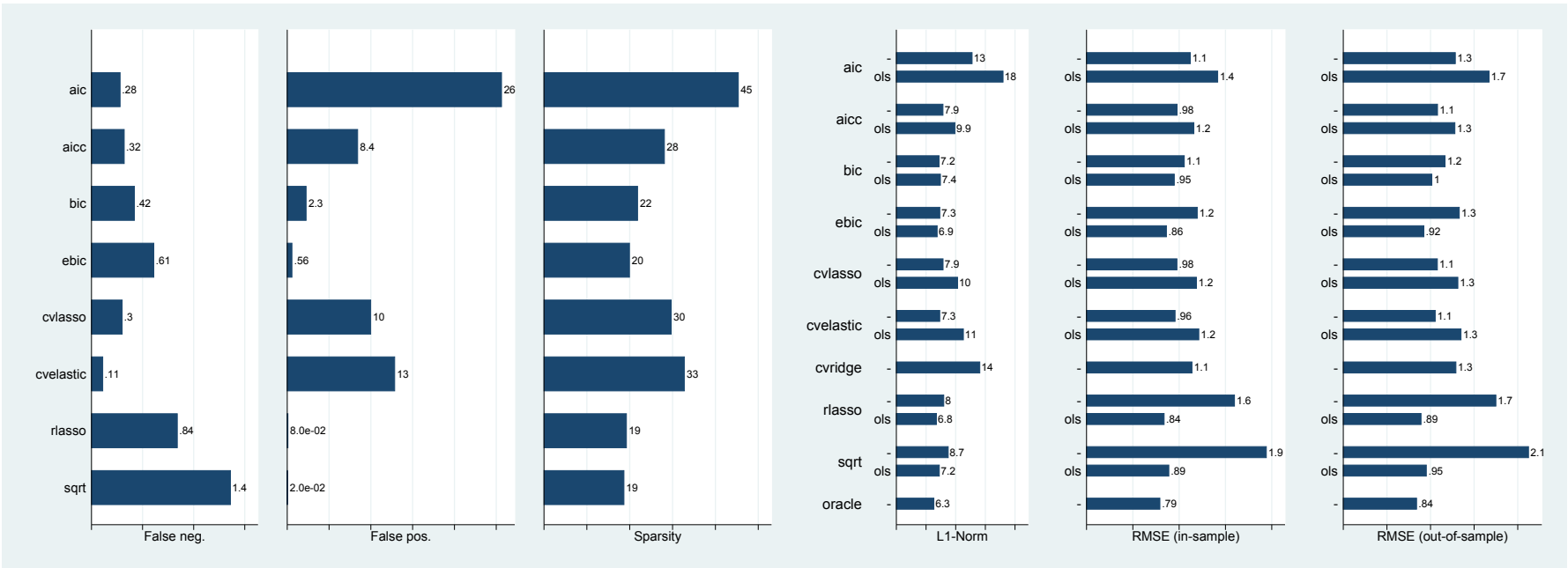
Design 1, sigma=1, theta=.7



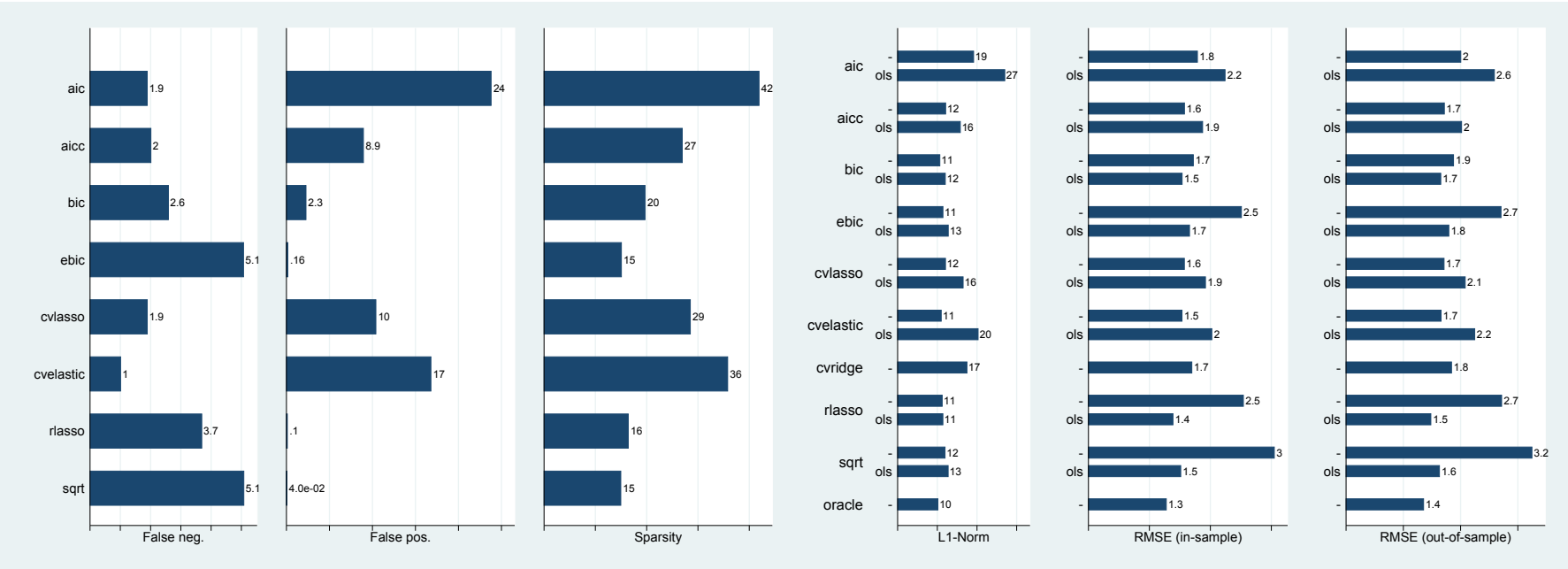
Design 1, sigma=2, theta=.7



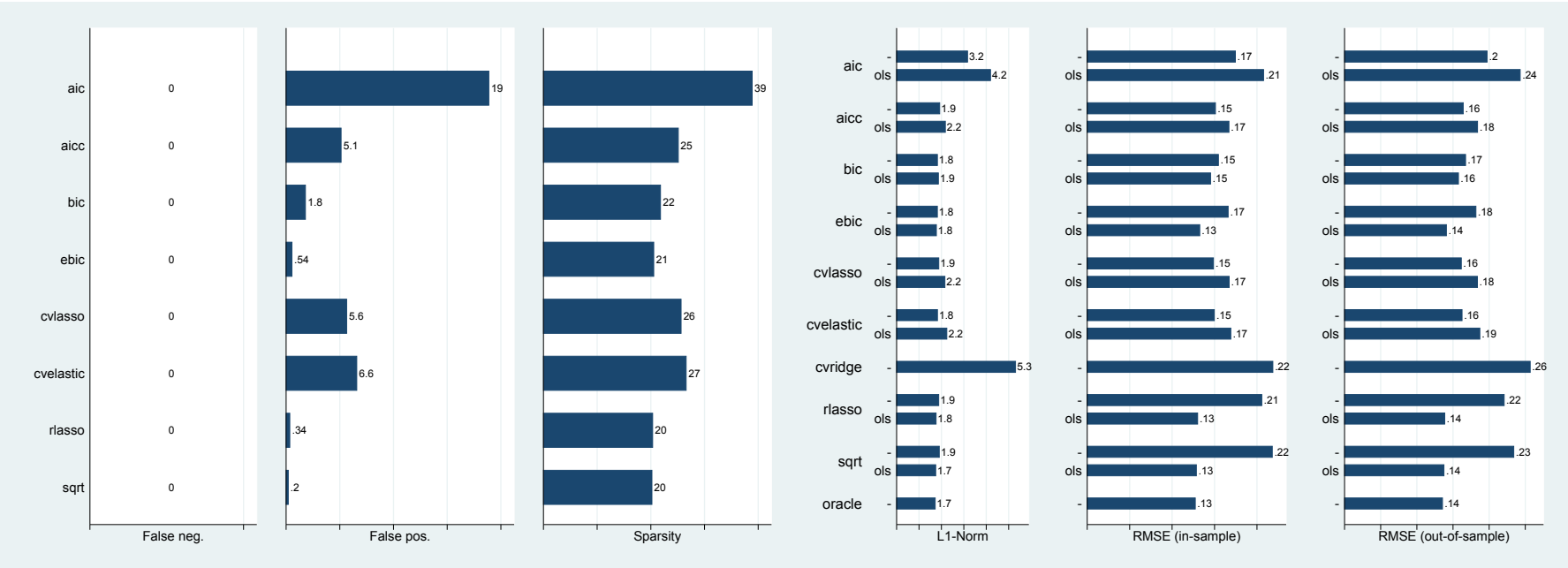
Design 1, sigma=3, theta=.7



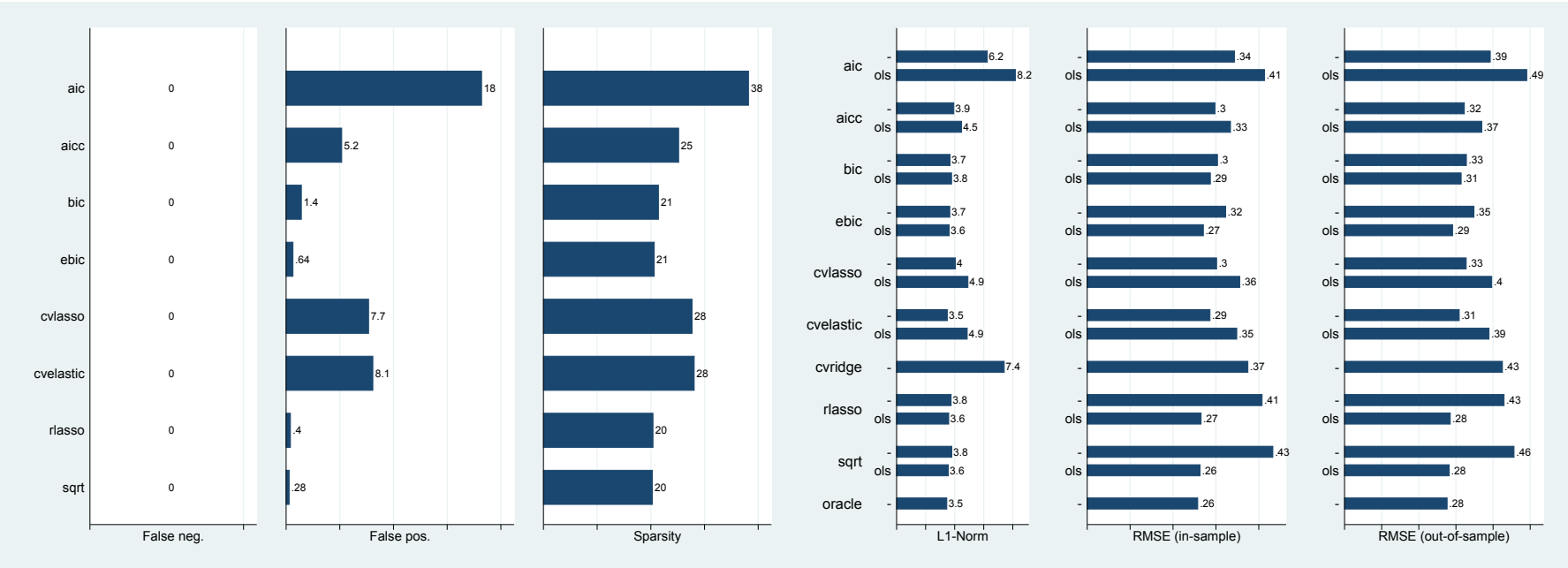
Design 1, sigma=5, theta=.7



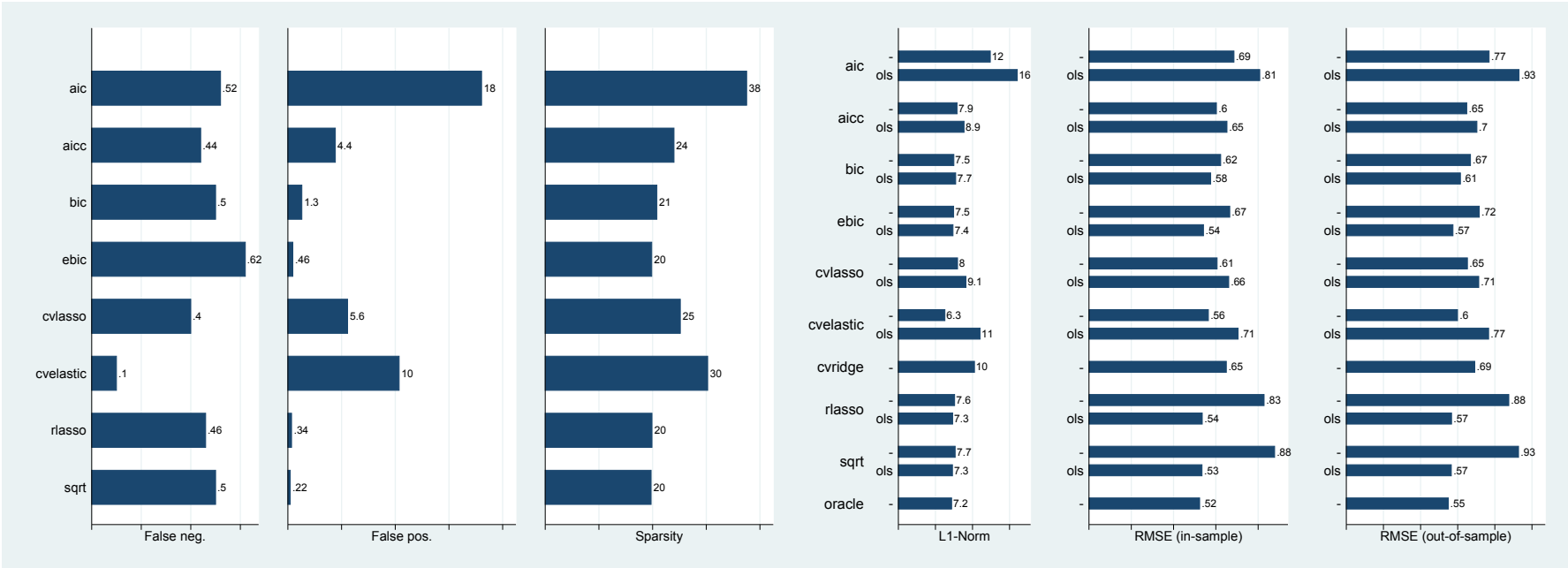
Design 1, sigma=.5, theta=.9



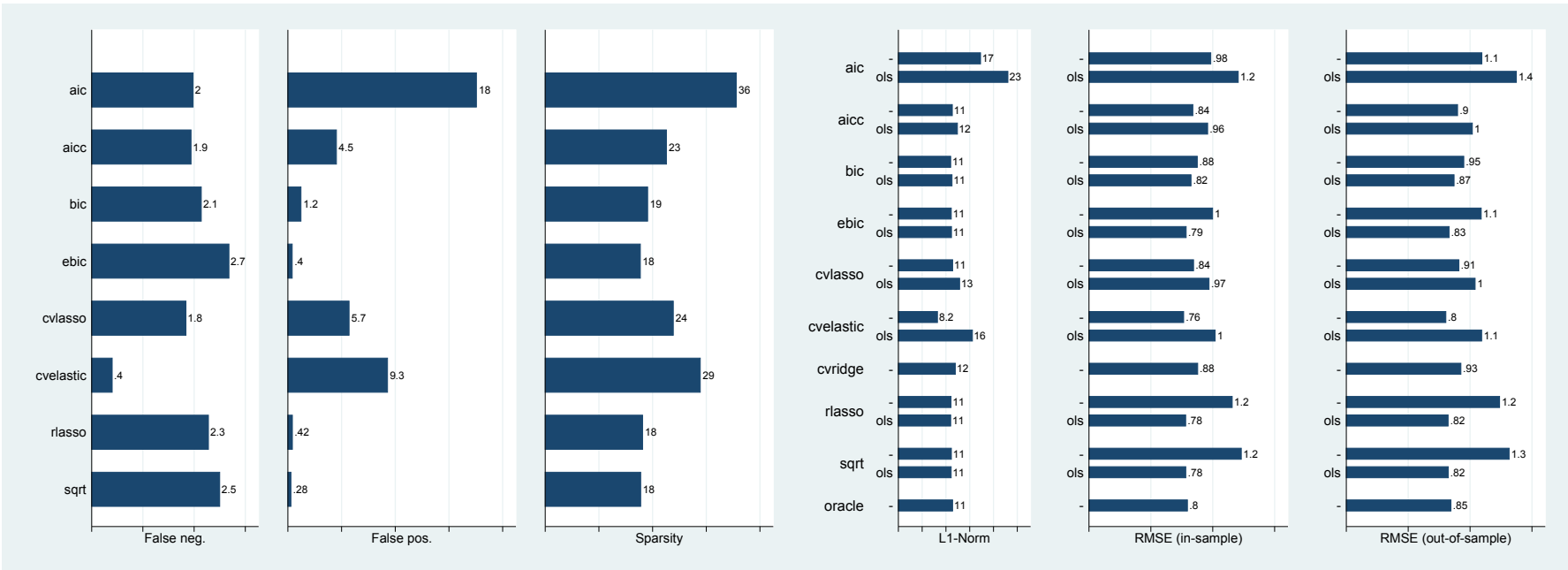
Design 1, sigma=1, theta=.9



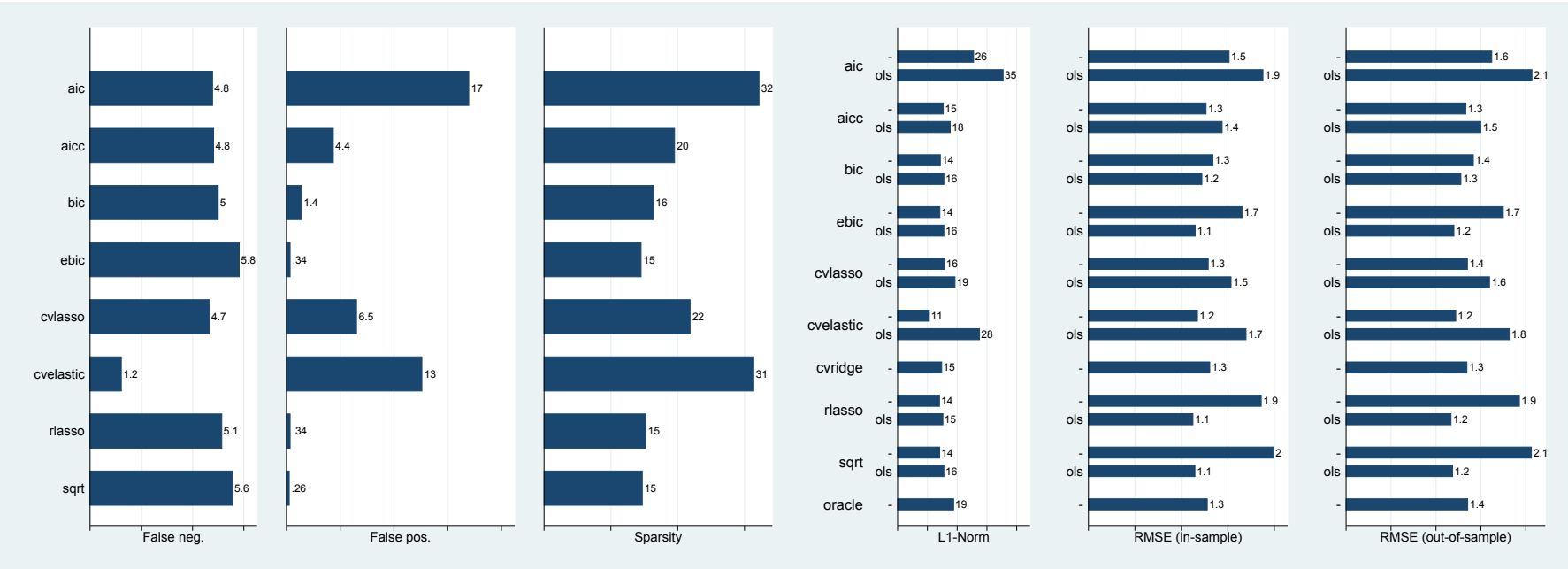
Design 1, sigma=2, theta=.9



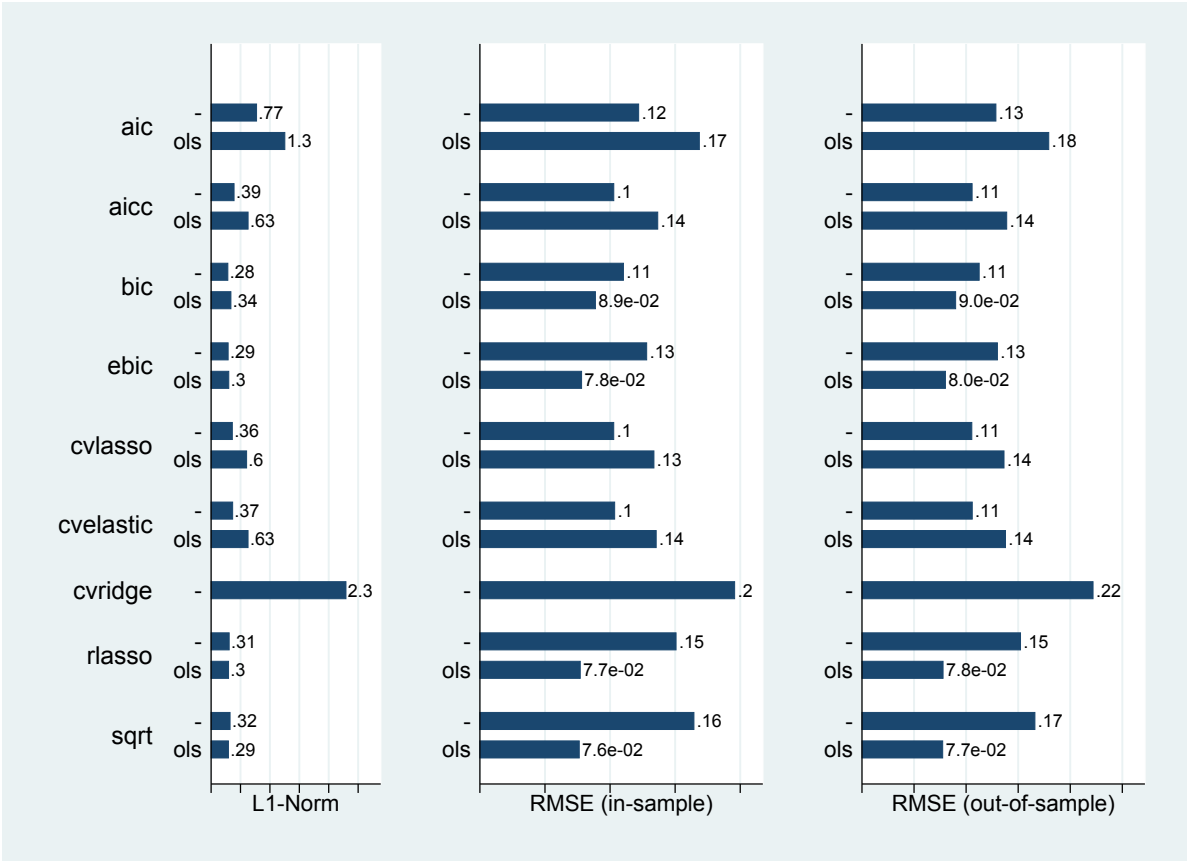
Design 1, sigma=3, theta=.9



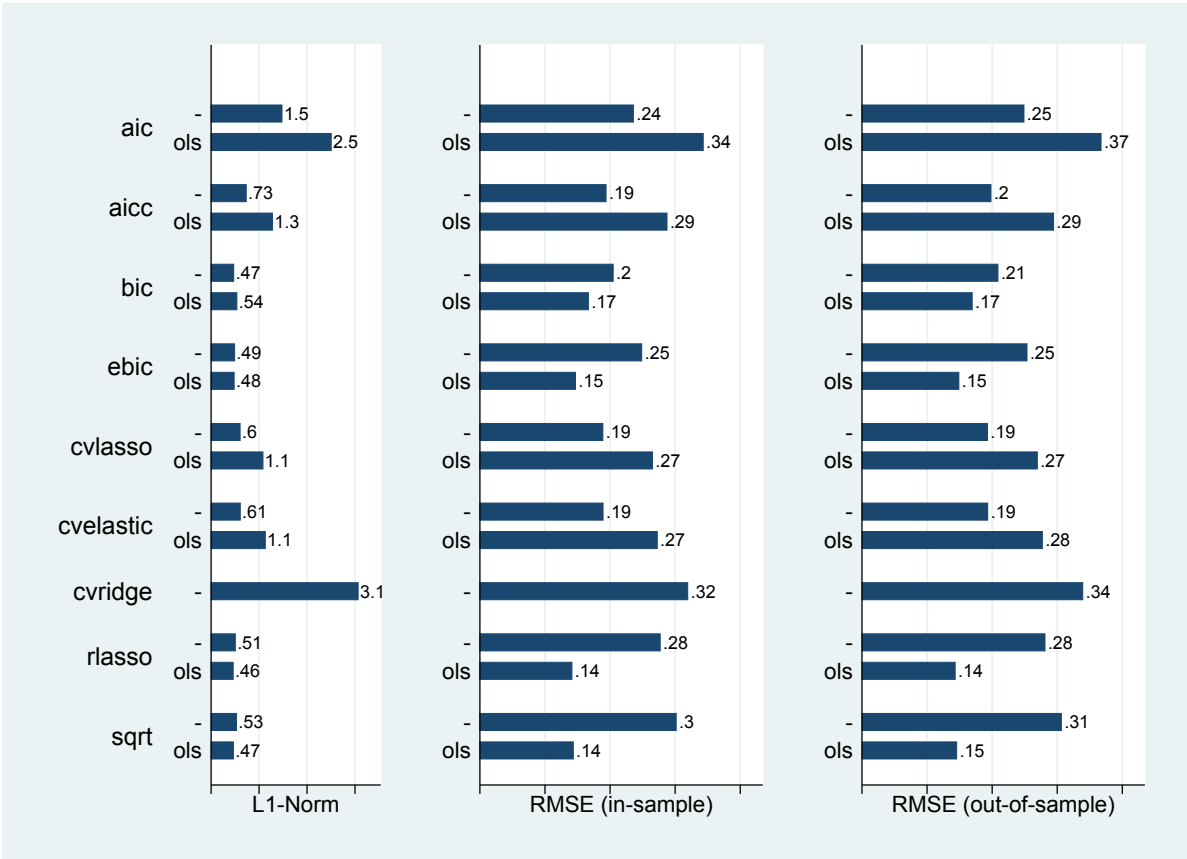
Design 1, sigma=5, theta=.9



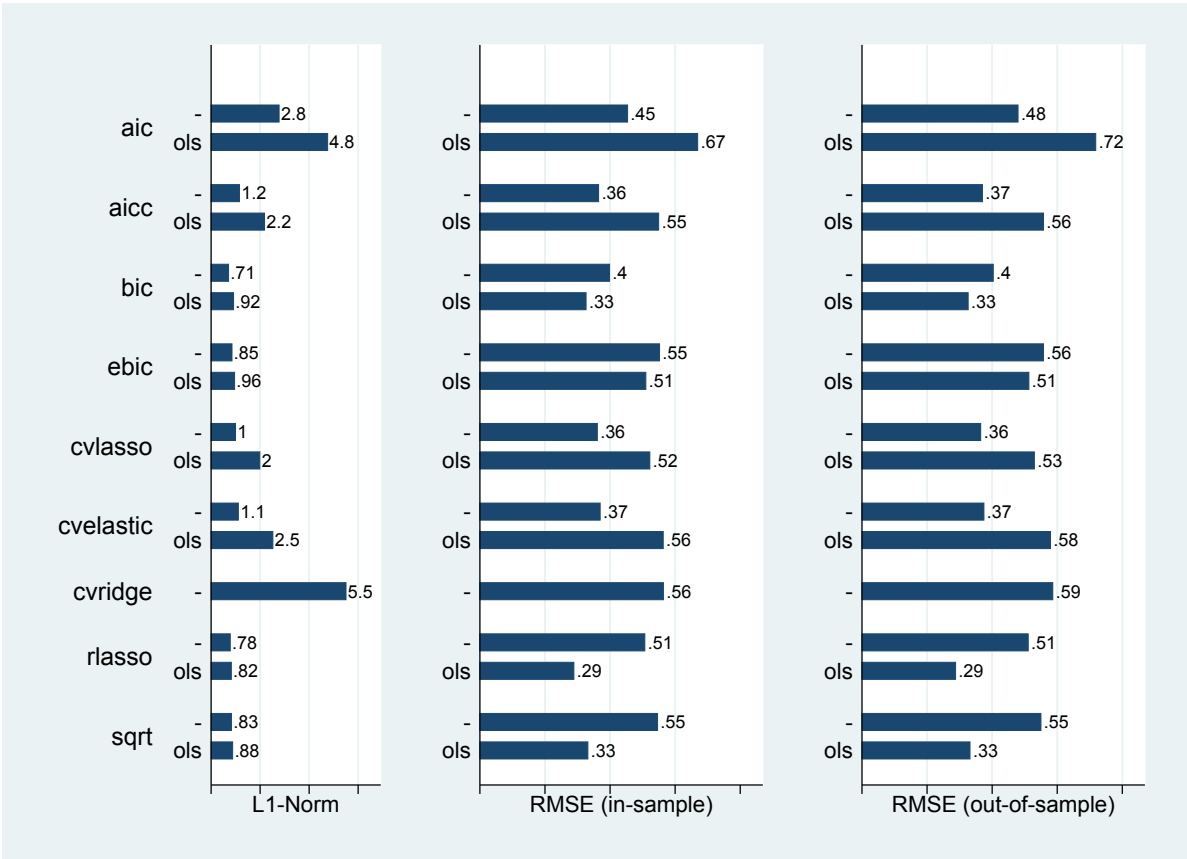
Design 2, sigma=.5, theta=.7



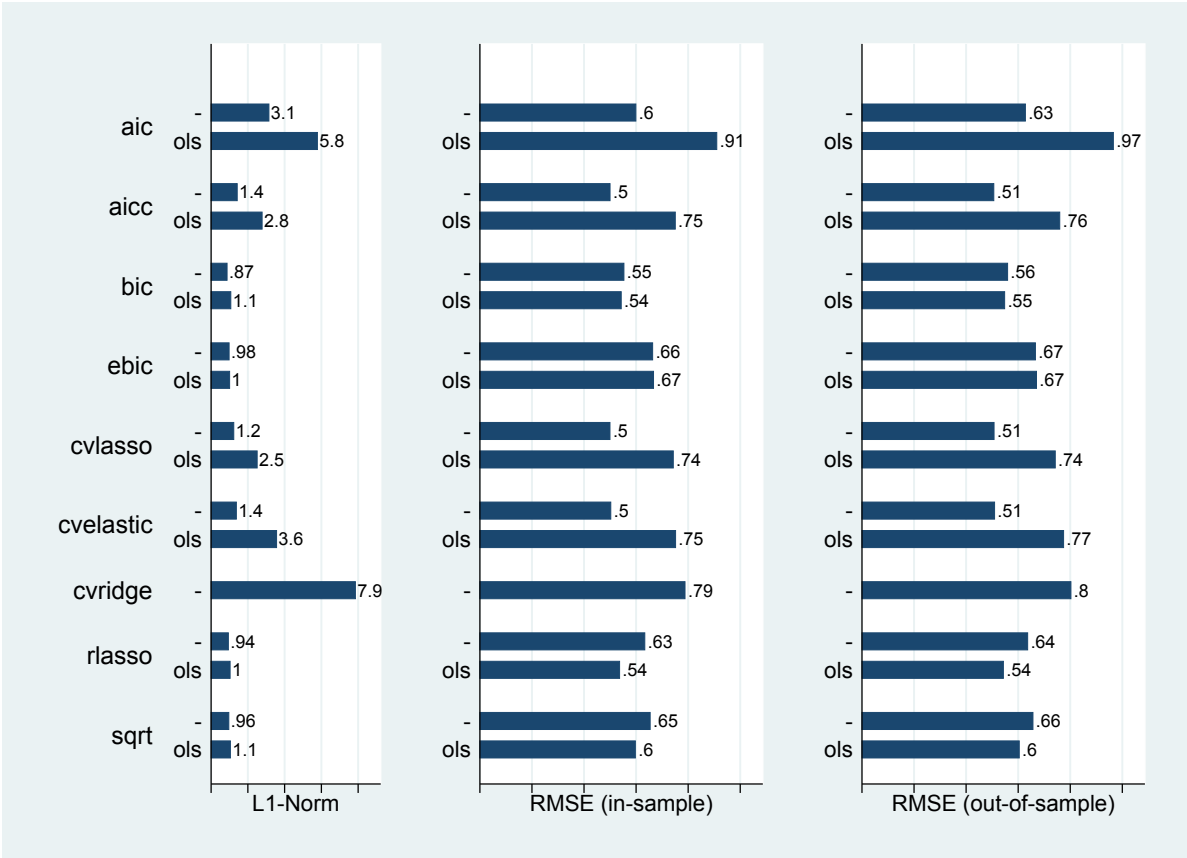
Design 2, sigma=1, theta=.7



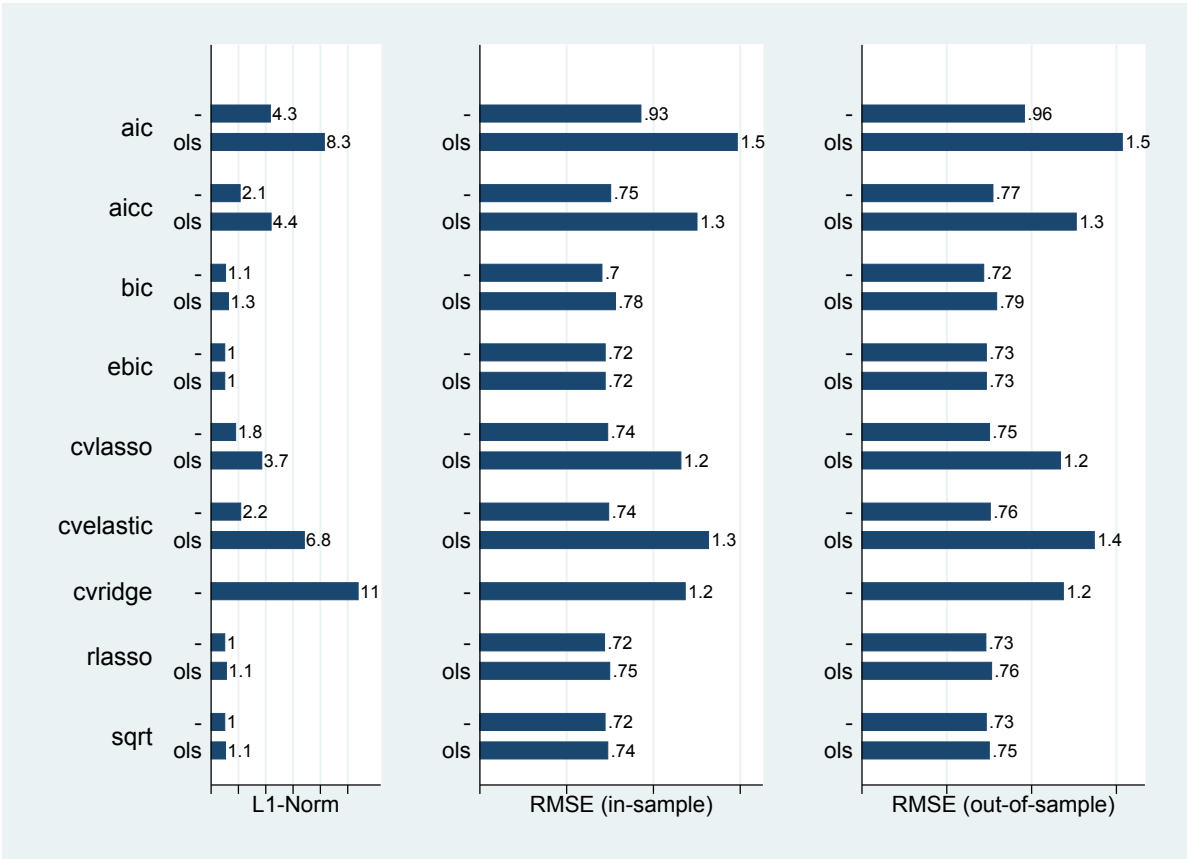
Design 2, sigma=2, theta=.7



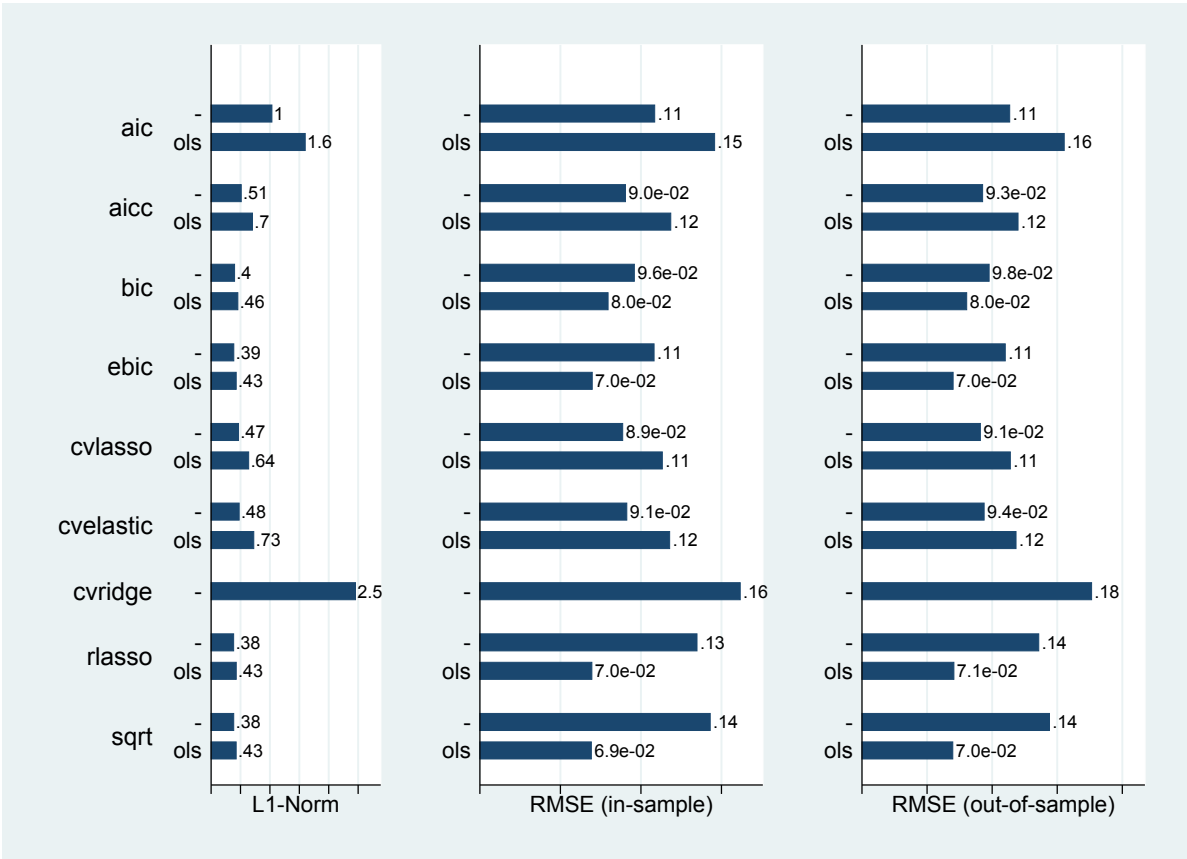
Design 2, sigma=3, theta=.7



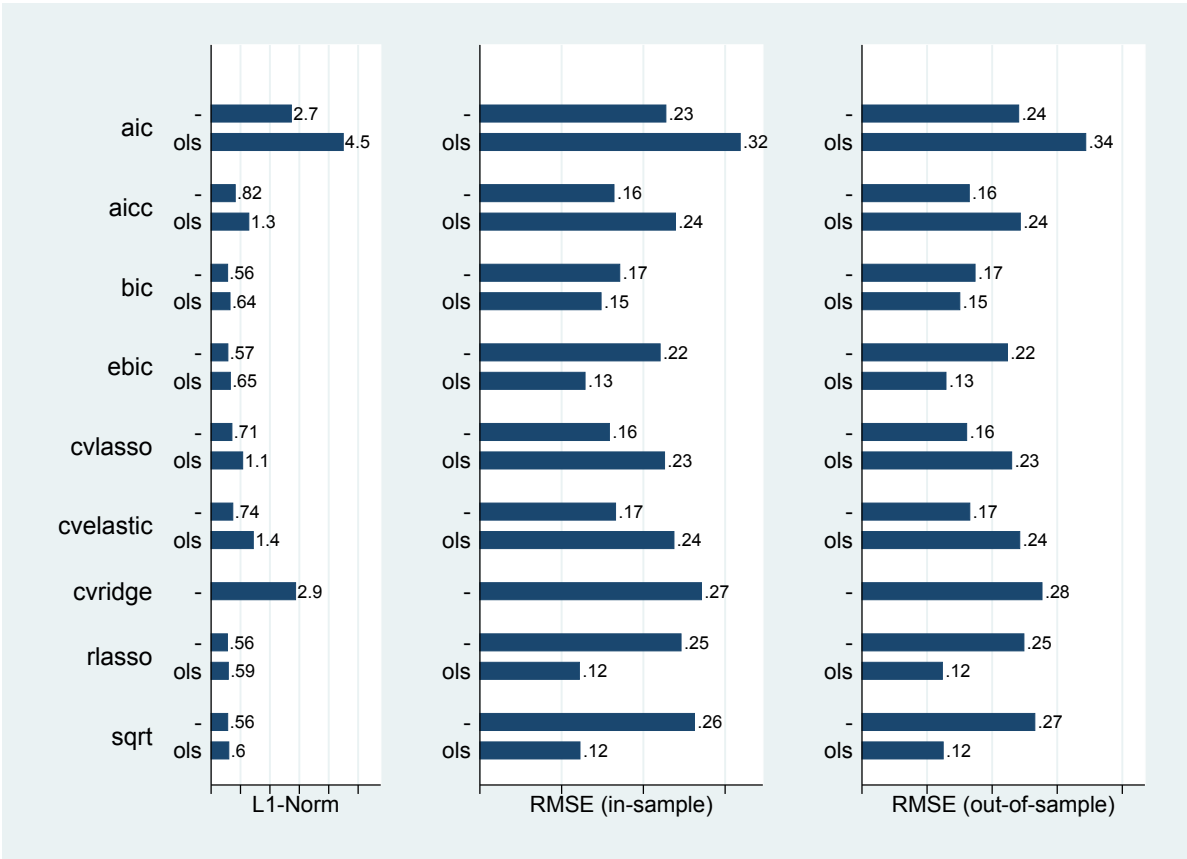
Design 2, sigma=5, theta=.7



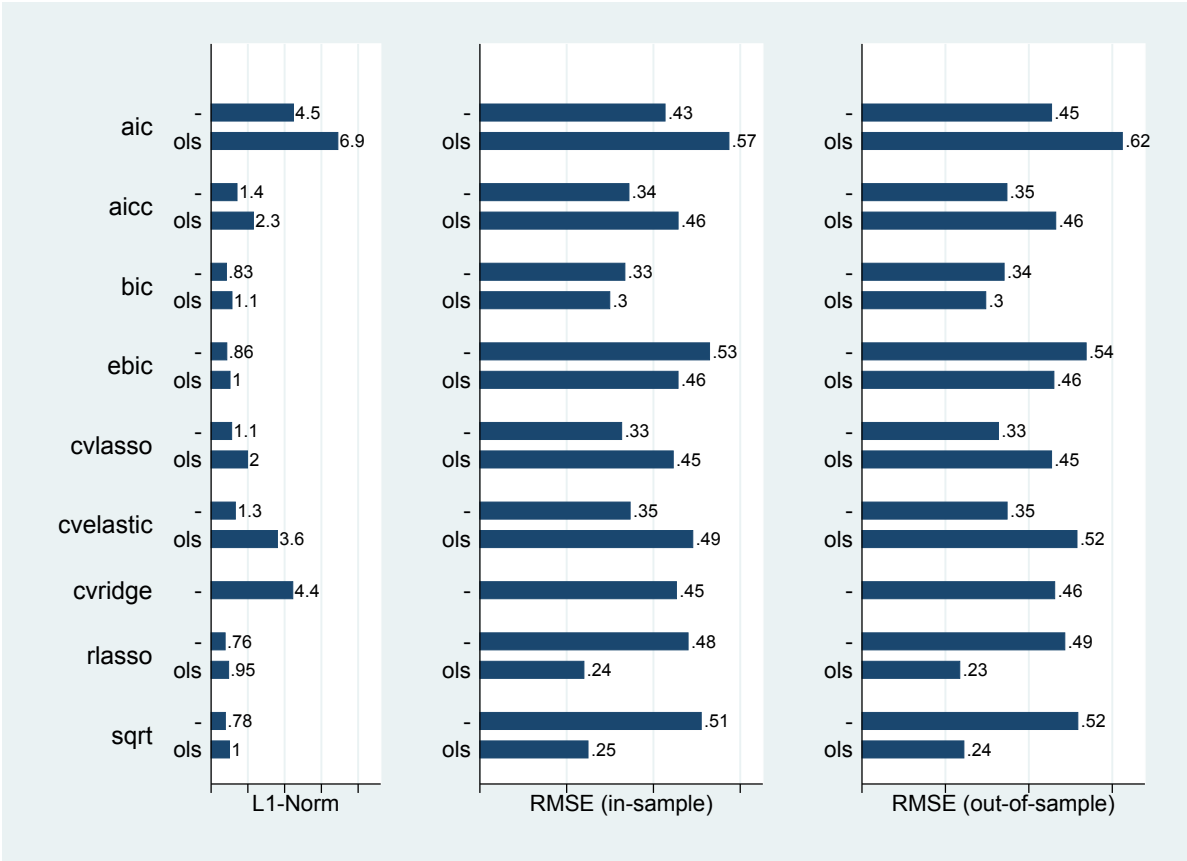
Design 2, sigma=.5, theta=.9



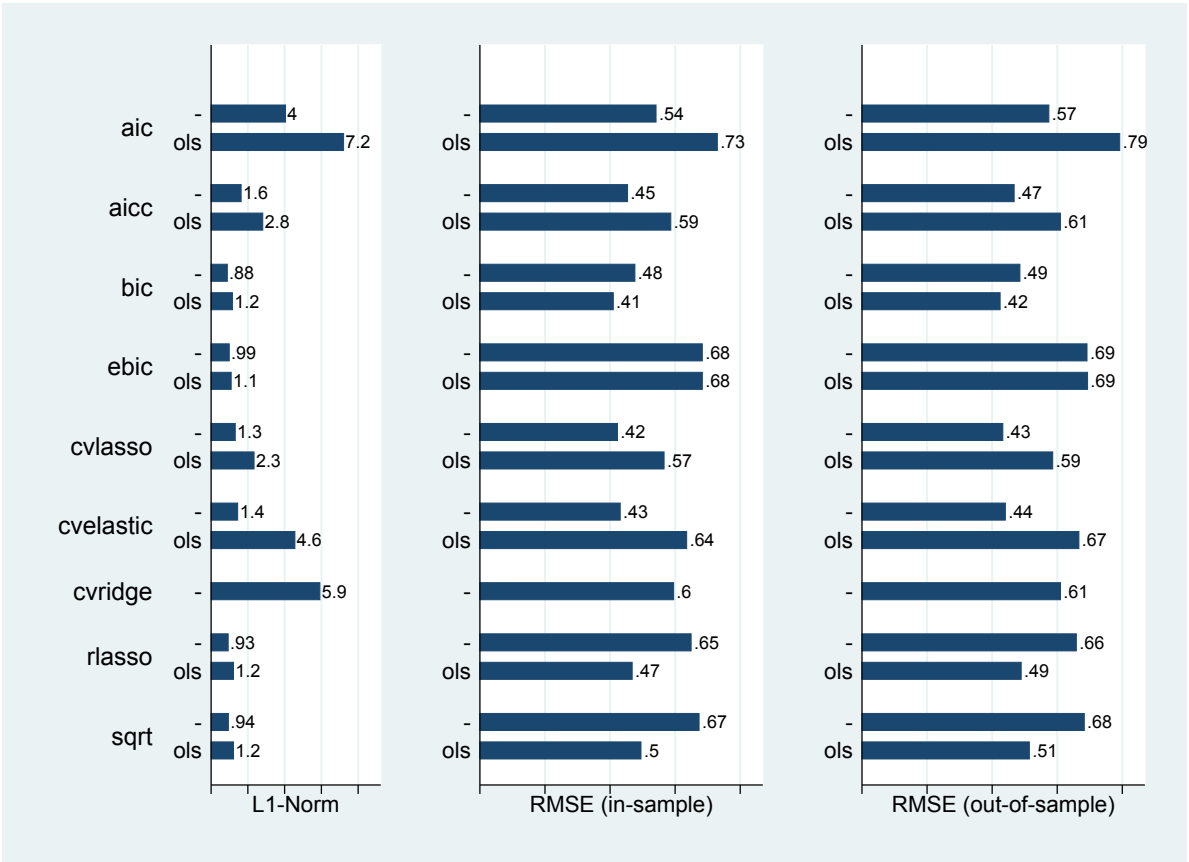
Design 2, sigma=1, theta=.9



Design 2, sigma=2, theta=.9



Design 2, sigma=3, theta=.9



Design 2, sigma=5, theta=.9