Backward Error $n = 1000$, $k = 1$, $\lambda = 0.4 \cdot \sigma_{\min}(A)$

Legend:
- $\|\widetilde{B} - B\|_2$
- $2\kappa(A)\|A\|_2 \varepsilon_1^{\mathrm{rel}} + 10.4 \varepsilon_2^{\mathrm{rel}}$
- backward error bound
- direct inversion error
- $\varepsilon_2^{\mathrm{abs}} \leq \frac{1}{2(\beta + \lambda \varepsilon_1^{\mathrm{abs}})}$
- $2(\beta + \lambda \varepsilon_1^{\mathrm{abs}})^2 \varepsilon_2^{\mathrm{abs}} \leq \frac{1}{2}$
- $\varepsilon_1^{\mathrm{abs}} = \frac{1}{2\|A\|_2}$

Axis labels: Value (vertical), ε (horizontal)