Table 2: **Bootstrap Robustness Analysis: Quantile Regression (1,000 Iterations)**

To test the stability of the structural signal in quantile regression, we performed a bootstrap analysis with 1,000 resamples (with replacement) from the 1970–2025 dataset. The table reports the distribution of the relative improvement in Pseudo-R^2 for tail-risk prediction when adding the $CARIA\_Peak$ signal to the baseline volatility model.

Statistic	**Value**
Iterations	1,000
Positive Improvement Probability	**100.0%**
Mean Improvement (ΔR^2)	**+26.3%**
95% Confidence Interval	**[12.2%, 45.7%]**