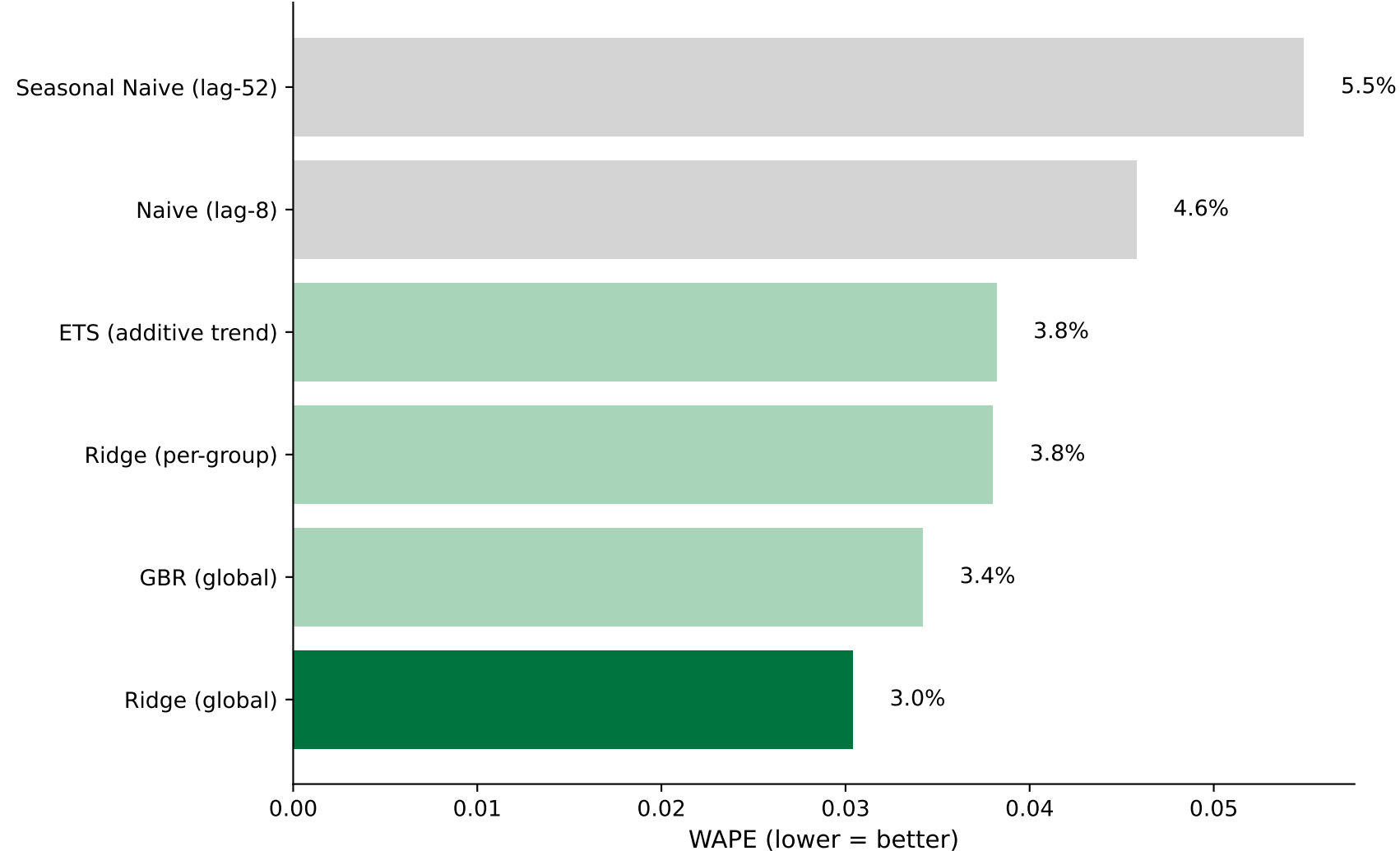


Can We Predict 8 Weeks Ahead Well Enough to Reduce Stock-Outs and Write-Offs?

YES — Our best model (Ridge (global)) achieves 3.0% WAPE, a 34% improvement over naive forecasting.

Forecast Accuracy by Model



Key Drivers

- Recent demand history (lags 8–12 weeks)
explains the majority of forecast variance
- Promotions increase weekly demand
(signal is sparse — only 29 promo weeks in 3 years)

Next Steps

- Deploy weekly automated forecast pipeline
- Expand promotion history & integrate
inventory data for safety-stock optimization
- Add drift monitoring with automatic
retraining triggers