## SHAP analysis of LSTM-MDN-RV-IV VaR 97.5% estimates High $IV_{10-day}$ (1 day ago) $BPV_{1-min}$ (1 day ago) $RV_{5-min}^{-}$ (1 day ago) $IV_{10-dav}$ (2 days ago) Feature value $BPV_{5-min}$ (1 day ago) $RV_{1-min}$ (1 day ago) $IV_{20-dav}$ (1 day ago) $RV_{1-min}^{-}$ (1 day ago) $IV_{10-dav}$ (3 days ago) $BPV_{1-min}$ (2 days ago) -0.0100-0.0075-0.0050-0.0025 0.0000 0.0025 0.0050 0.0075 0.0100

SHAP value (impact on model output)