

# The role of jumps and asset liquidity in realized volatility modeling and forecasting

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## Abstract

Building on an extensive empirical analysis I investigate the relevance of jumps and signed variations in predicting Realized Volatility across asset liquidity levels. I show that properly accounting for intra-day volatility patterns and staleness sensibly reduces the identified jumps, in particular for low and moderate liquidity assets. Modelling realized variance using jumps and intra-day return sign improve the in-sample fit of commonly adopted specifications, irrespective of assets liquidity. From a forecasting perspective, the empirical evidence I report shows that most models, irrespective of their flexibility, are statistically equivalent in many cases, with the exception of low liquidity assets. These results are confirmed with different samples, forecast horizons and possible transformations of the dependent and explanatory variables.

**Keywords:** jumps, staleness, liquidity, forecasting, Realized Volatility.  
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