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Econometric Reviews >

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Original Articles

Moving Average-Based Estimators of Integrated Variance

Peter R. Hansen , Jeremy Large & Asger Lunde

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returns. We benchmark the scaled MA-based estimator to subsample and realized kernel estimators and find that the MA-based estimator performs well despite the misspecification.

Keywords:

- Bias correction
- High-frequency data
- Integrated variance
- Moving average
- Realized variance
- Realized volatility

JEL Classification:

- C10
- C22
- C80

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Notes

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¹Within the first 10 minutes of the trading day, we use the first 100 transactions (transactions are sorted by time) to calculate the MA-based estimator. The second 100 transactions are used to calculate the realized kernel estimator. The third 100 transactions are used to calculate the subsample estimator. The fourth 100 transactions are used to calculate the realized variance estimator. The fifth 100 transactions are used to calculate the realized volatility estimator.
- ²Andersen et al. (2003) use a 5-minute sampling frequency for NYSE data. The MA-based estimator is calculated using the first 100 transactions. The realized kernel estimator is calculated using the second 100 transactions. The subsample estimator is calculated using the third 100 transactions. The realized variance estimator is calculated using the fourth 100 transactions. The realized volatility estimator is calculated using the fifth 100 transactions.
- ³The main results are robust to different sampling frequencies. Graphs giving this information are available from the authors on request.

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