Financial Econometrics and Volatility Models
Recent Results for Realized Variance Estimators

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Volatility Signature Plot for AA: Transactions Prices

Positive bias for transaction prices
Volatility Signature Plot for AA: Mid-quotes

Volatility Signature Plot for MSFT: Transactions Prices
Approximate Optimal Sampling Frequencies of S&P 100 Stocks

Ratios of 5-min MSE to Optimal Sampling MSE
SBC Optimal Sampling Intervals (minutes)

Volatility Signature Plot for AA: CTS

transactions

Bid quotes

Ask quotes

Mid-quotes

Average RV, AA (2000)

Sampling frequency in Seconds

24.1 sec between trades on ave.

17.5 sec between quotes on ave.
Volatility Signature Plot for AA: TTS

- 24.1 secs between trades on ave.
- 7.5 secs between quotes on ave.

Evidence for negative correlation between efficient prices and noise.

Volatility Signature Plot for Bias Corrected RV

- Time dependence lasts for up to 2 minutes.
Volatility Signature Plot for Bias Corrected RV

Time dependence is only 20 seconds

Kernel Functions

Figure 5: Available Kernels
1-Day Variance Signature Plot: Rectangular Kernel Estimator

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1-Day Variance Signature Plot: Bartlett Kernel Estimator

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Implication of Non-synchronous Trading

Figure 1.8: Coveco Returns: Average percentage of coveco returns for GE and MSFT, 2004.

Covariance Signature Plot for GE and MSFT

Figure 1.9: Average Covariance Signature Plot: Average covariance signature plot for GE and MSFT, 2004.
1-Day Covariance Signature Plot: GE and MSFT

1-Day Covariance Signature Plot: Kernel Estimators