

Package: *RTAQ*

Tools for the analysis of trades and quotes in R

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TAQ: Trades And Quotes

- All intraday transaction and quote data
 - New York Stock Exchange
- Popular data source for:
 - Researchers:
 - Ex-post liquidity and volatility measurement
 - Market microstructure
 - Practitioners:
 - Intraday trading strategies

Data example

- Trade data

```
                SYMBOL EX  PRICE      SIZE      COND CR  G127
2008-01-02 15:59:47 "AAPL" "Q" "195.01"  "700"    "0"  "0"  "0"
2008-01-02 15:59:48 "AAPL" "Q" "195"    "1700"   "0"  "0"  "0"
2008-01-02 15:59:49 "AAPL" "Q" "195"    "200"    "0"  "0"  "0"
2008-01-02 15:59:53 "AAPL" "Q" "194.99" "200"    "0"  "0"  "0"
2008-01-02 15:59:54 "AAPL" "Q" "195.02" "300"    "0"  "0"  "0"
2008-01-02 15:59:59 "AAPL" "Q" "194.9300" " 1700" "0"  "0"  "0"
```

- Quote data

```
                SYMBOL EX  BID      BIDSIZE OFFER      OFFERSIZE MODE
2008-01-02 15:59:30 "AAPL" "T" "195.02" "12"    "195.04" "32"    "12"
2008-01-02 15:59:31 "AAPL" "T" "195"    "233"   "195.02" "202"   "12"
2008-01-02 15:59:32 "AAPL" "T" "194.96" "27"    "195"    "62"    "12"
2008-01-02 15:59:33 "AAPL" "T" "194.96" "44"    "195"    "45"    "12"
2008-01-02 15:59:34 "AAPL" "T" "194.96" "39"    "195"    "144"   "12"
2008-01-02 15:59:35 "AAPL" "T" "194.96" "5"     "195"    "14"    "12"
```

- Data is stored in R as xts object

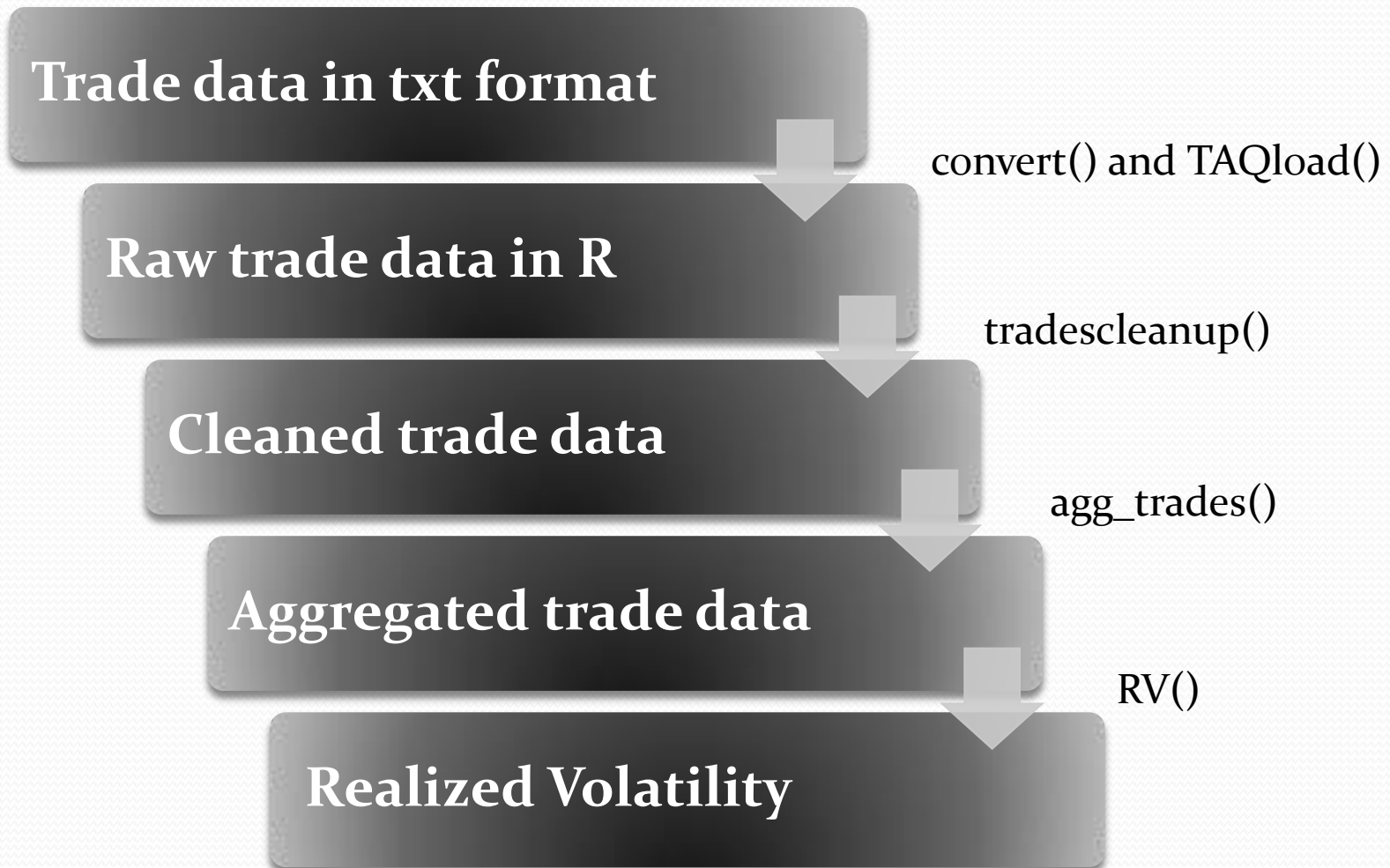
What the package does

Data property	RTAQ
Data errors	Cleaning functions
Non synchronic observations	Aggregation functions
Rich source of information	Volatility measures (jump robust) Liquidity measures

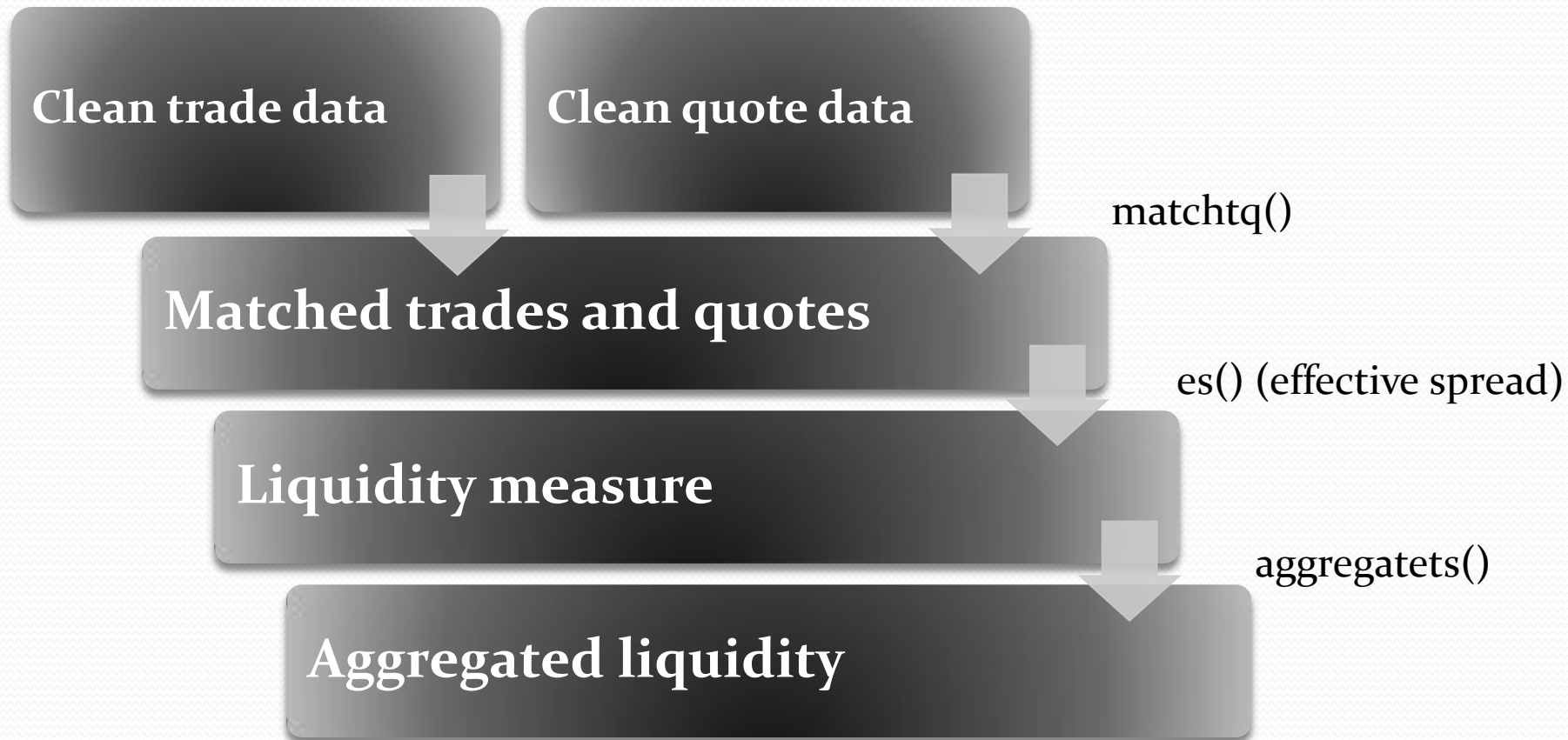
Using the functionality of

- xts (extensible time-series)
 - Fast
 - Time based subsetting
- timeDate

Example 1: the functionality of RTAQ



Example 2: the functionality of RTAQ



RTAQ in development

- Available on r-forge:
 - <http://r-forge.r-project.org/projects/blotter/>
 - Part of the TradeAnalytics project

- Questions or remarks are most welcome

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Phd K.U.Leuven:

Subject: "Use of high-frequency data in portfolio management"

