Package: AMIM (via r-universe)

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Type Package

Title Compute the Adjusted Market Inefficiency Measure

Version 1.0.0

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Description Fast tool to calculate the Adjusted Market Inefficiency Measure following Tran & Leirvik (2019) <doi:10.1016/j.frl.2019.03.004>. This tool provides rolling window estimates of the Adjusted Market Inefficiency Measure for multiple instruments simultaneously.

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Encoding UTF-8

LazyData true

Depends R (>= 3.10)

RoxygenNote 7.1.1

Imports data.table

URL https://github.com/gelotran/AMIM, https://gelotran.github.io/AMIM/

BugReports https://github.com/gelotran/AMIM/issues

Repository https://gelotran.r-universe.dev

RemoteUrl https://github.com/gelotran/amim

RemoteRef HEAD

RemoteSha 1351135f24ffb34ef660148145992d89ecb273cd

Contents

AMIM.roll *AMIM roll*

Description

This function computes the rolling window AMIM for a given data.table

Usage

```
AMIM.roll(
  data.table,
  identity.col,
  Date.col,
  rollWindow,
  return.col,
  min.obs,
  max.lag
)
```

Arguments

data.table	data.table with the data
identity.col	column name of the identity intrument for example the stock ticker
Date.col	column name of the date column with format "YYYY-mm-dd" (for example "2019-12-01")
rollWindow	number of days to compute the AMIM
return.col	column name of the return column
min.obs	minimum number of observations to compute the AMIM
max.lag	maximum number of lags to compute the MIM and then AMIM. The algorithm will select the number of lags that minimize the AIC but the maximum number of lags is limited by this parameter. In case the AIC is zero for the zero lag then the algorithm will estimate an AR(1) model. This is to avoid zero in the MIM and AMIM.

Value

data.table with the MIM, AMIM and the number of lags used to compute the MIM, AMIM, confidence interval (CI), and the number of lags (N).

Examples

```
library(AMIM)
library(data.table)
data <- AMIM::exampledata # load the example data
AMIM <- AMIM.roll(
  data.table = data, identity.col = "ticker", rollWindow = 60,
```

```
  Date.col = "Date", return.col = "RET", min.obs = 30, max.lag = 10
)

AMIM[, .SD[(.N - 5):(.N), ], by = ticker] # Last 5 rows of each instrument
```

`CI` *Confidence Interval Data to compute AMIM*

Description

Confidence Interval Data to compute AMIM

Usage

```
CI
```

Format

'CI' A data datatable with the following columns:

N Number of lags

a Scale parameter equal to 1 as in Tran & Leivrik (2019)

CI Confidence interval accordingly each number lags and scale parameter ...

Source

Tran & Leivrik (2019)

`exampledata` *Example Data to compute AMIM*

Description

Example Data to compute AMIM

Usage

```
exampledata
```

Format

'exampledata' A data datatable with the following columns:

Date Date format YYYY-MM-DD

ticker Imaginary ticker

RET Imaginary return ...

Source

Vu Le Tran

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