

Package ‘TrueWAP’

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Type Package

Title True Range-Weighted Average Price ('TrueWAP')

Version 0.1.0

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Description This groundbreaking technical indicator directly integrates volatility into price averaging by weighting median range-bound prices using the True Range. Unlike conventional metrics such as TWAP (Time-Weighted Average Price), which focuses solely on time, or VWAP (Volume-Weighted Average Price), which emphasizes volume, 'TrueWAP' captures fluctuating market behavior by reflecting true price movement within high/low performance boundaries.

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URL <https://github.com/CallawayCross/TrueWAP>

BugReports <https://github.com/CallawayCross/TrueWAP/issues>

Depends R (>= 4.3.2)

Imports zoo (>= 1.8-14), TTR (>= 0.24.4)

Encoding UTF-8

LazyData true

RoxygenNote 7.3.2

Suggests knitr, rmarkdown, testthat (>= 3.0.0)

VignetteBuilder knitr

Config/testthat/edition 3

NeedsCompilation no

Repository CRAN

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anchoredTrueWAP	<i>Title anchoredTrueWAP</i>
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Description

Calculates Anchored True Range-Weighted Average Price (TrueWAP)

Usage

```
anchoredTrueWAP(high, low, close, true_range, period)
```

Arguments

high	Vector of High Values
low	Vector of Low Values
close	Vector of Close Values
true_range	Vector of True Range Values
period	Vector of bars since start of fixed period

Value

Vector of Anchored TrueWAP values

Examples

```
data(nikkei)
anchoredTrueWAP(
  high = nikkei$High
  , low = nikkei$Low
  , close = nikkei$Close
  , true_range = nikkei$tr
  , period = nikkei$bars_since_segment
)
```

anchoredTWAP	<i>Title anchoredTWAP</i>
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Description

Calculates Anchored Time-Weighted Average Price (TWAP)

Usage

```
anchoredTWAP(OHLC, period)
```

Arguments

OHLC	Data frame object with Open, High, Low, & Close fields
period	Vector of bars since start of fixed period

Value

Vector of Anchored TWAP values

Examples

```
data(nikkei)
anchoredTWAP(
OHLC = nikkei$OHLC
, period = nikkei$bars_since_segment
)
```

anchoredVWAP	<i>Title anchoredVWAP</i>
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Description

Calculates Anchored Volume-Weighted Average Price (VWAP)

Usage

```
anchoredVWAP(HLC3, volume, period)
```

Arguments

HLC3	Vector of High, Low, Close Average Values
volume	Vector of Volume values
period	Vector of bars since start of fixed period

Value

Vector of Anchored VWAP values

Examples

```
data(nikkei)
anchoredVWAP(
  HLC3 = nikkei$HLC3
  , volume = nikkei$Volume
  , period = nikkei$bars_since_segment
)
```

nikkei

nikkei

Description

An example data set of OHLCV data for Nikkei 225 (Osaka), Active Daily Continuation

Usage

```
data("nikkei")
```

Format

A data frame with 4411 observations on the following 27 variables.

Open a numeric vector

High a numeric vector

Low a numeric vector

Close a numeric vector

Volume a numeric vector

Adjusted a numeric vector

OHLC a numeric vector

HLC3 a numeric vector

tr a numeric vector

atr a numeric vector

trueHigh a numeric vector

trueLow a numeric vector

segment a Date

Date a Date

FirstRowNumSegment a numeric vector

RowNum a numeric vector

bars_since_segment a numeric vector
 current_std a numeric vector
 Mature_Days a numeric vector
 Mature_STD a numeric vector
 lags_mature_days a numeric vector
 lags_mature_std a numeric vector
 current_sma a numeric vector
 current_adiv a numeric vector
 Mature_ADIV a numeric vector
 Current_IV a numeric vector
 lags_mature_adiv a numeric vector

Examples

```

data(nikkei)
## maybe str(nikkei) ; plot(nikkei) ...

```

TrueWAP

Title TrueWAP

Description

Calculates True Range-Weighted Average Price (TrueWAP)

Usage

```
TrueWAP(high, low, close, true_range, period)
```

Arguments

high	Vector of High Values
low	Vector of Low Values
close	Vector of Close Values
true_range	Vector of True Range Values
period	Rolling window length

Value

Vector of TrueWAP values

Examples

```
data(nikkei)
TrueWAP(
  high = nikkei$High
  , low = nikkei$Low
  , close = nikkei$Close
  , true_range = nikkei$tr
  , period = 50)
```

 TWAP

Title TWAP

Description

Calculates Time-Weighted Average Price (TWAP)

Usage

```
TWAP(OHLC, period)
```

Arguments

OHLC	Data frame object with Open, High, Low, & Close fields
period	Rolling window length

Value

Vector of TWAP values

Examples

```
data(nikkei)
TWAP(nikkei$OHLC, 50)
```

 VWAP

Title VWAP

Description

Calculates Volume-Weighted Average Price (VWAP)

Usage

```
VWAP(HLC3, volume, period)
```

Arguments

HLC3	Vector of High, Low, Close Average Values
volume	Vector of Volume values
period	Rolling window length

Value

Vector of VWAP values

Examples

```
data(nikkei)
VWAP(nikkei$HLC3, nikkei$Volume, 50)
```

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