Package ‘dataonderivatives’

October 13, 2022

Type Package

Title Easily Source Publicly Available Data on Derivatives

Version 0.4.0

Description Post Global Financial Crisis derivatives reforms have lifted the veil off over-the-counter (OTC) derivative markets. Swap Execution Facilities (SEFs) and Swap Data Repositories (SDRs) now publish data on swaps that are traded on or reported to those facilities (respectively). This package provides you the ability to get this data from supported sources.

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URL https://github.com/imanuelcostigan/dataonderivatives, http://imanuelcostigan.github.io/dataonderivatives/

BugReports https://github.com/imanuelcostigan/dataonderivatives/issues

Depends R (>= 4.1.0)

Imports httr2, readr, tibble, vetr

Suggests covr, testthat (>= 3.0.0)

Config/testthat/edition 3

Config/testthat/parallel true

Encoding UTF-8

RoxygenNote 7.1.2

NeedsCompilation no

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Repository CRAN

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R topics documented:

bsef 2
cme 3
ddr 4

Index 5

bsef *Get Bloomberg SEF data*

Description

The Bloomberg Swap Execution Facility (SEF) offers customers the ability to execute derivative instruments across a number of different asset classes. It is required to make publicly available price, trading volume and other trading data. It publishes this data on its website. I have reverse engineered the JavaScript libraries used by its website to call the Bloomberg Application Service using `POST` requests to a target URL.

Usage

```
bsef(start, end = start, asset_class)
```

Arguments

`start`	the date from which data is required as Date or DateTime object. Only the year, month and day elements of the object are used. Must be of length one.
`end`	the date for which data is required as Date or DateTime object. Only the year, month and day elements of the object are used. Must be of length one. Defaults to the `start` date.
`asset_class`	the asset class for which you would like to download trade data. Valid inputs are `"CR"` (credit), `"IR"` (rates), `"EQ"` (equities), `"FX"` (foreign exchange), `"CO"` (commodities) and must be a string.

Value

a tibble containing the requested data, or an empty tibble if data is unavailable

References

Bloomberg SEF data

Examples

```
## Not run:
bsef(as.Date("2021-05-12"), as.Date("2021-05-14"), "IR")

## End(Not run)
```

cme *Get CME SDR data*

Description

The CME Swap Data Repository (SDR) is a registered U.S. swap data repository that allows market participants to fulfil their public disclosure obligations under U.S. legislation. CME is required to make publicly available price, trading volume and other trading data. It publishes this data on an FTP site. Column specs are inferred from all records in the file (i.e. `guess_max` is set to `Inf` when calling readr::read_csv).

Usage

```
cme(date, asset_class, show_col_types = FALSE)
```

Arguments

`date` the date for which data is required as Date or DateTime object. It will only use the year, month and day elements to determine the set of trades to return. It will return the set of trades for the day starting on `date`.

`asset_class` the asset class for which you would like to download trade data. Valid inputs are `"IR"` (rates), `"FX"` (foreign exchange), `"CO"` (commodities). This must be a string.

`show_col_types` if `FALSE` (default), do not show the guessed column types. If `TRUE` always show the column types, even if they are supplied. If `NULL` only show the column types if they are not explicitly supplied by the col_types argument.

Value

a tibble containing the requested data, or an empty tibble if data is unavailable

References

CME SDR

Examples

```
## Not run:
cme(as.Date("2015-05-06"), "CO")

## End(Not run)
```

ddr *Get DDR data*

Description

The DTCC Data Repository is a registered U.S. swap data repository that allows market participants to fulfil their public disclosure obligations under U.S. legislation. This function will give you the ability to download trade-level data that is reported by market participants. Column specs are inferred from all records in the file (i.e. `guess_max` is set to `Inf` when calling readr::read_csv).

Usage

```
ddr(date, asset_class, show_col_types = FALSE)
```

Arguments

`date`	the date for which data is required as Date or DateTime object. Only the year, month and day elements of the object are used and it must of be length one.
`asset_class`	the asset class for which you would like to download trade data. Valid inputs are `"CR"` (credit), `"IR"` (rates), `"EQ"` (equities), `"FX"` (foreign exchange), `"CO"` (commodities). This must be a string.
`show_col_types`	if `FALSE` (default), do not show the guessed column types. If `TRUE` always show the column types, even if they are supplied. If `NULL` only show the column types if they are not explicitly supplied by the col_types argument.

Value

a tibble that contains the requested data. If no data exists on that date, an empty tibble is returned.

References

DDR Real Time Dissemination Platform

Examples

```
## Not run:
ddr(as.Date("2017-05-25"), "IR") # Not empty
ddr(as.Date("2020-12-01"), "CR") # Not empty

## End(Not run)
```

Index

bsef, 2

cme, 3

ddr, 4

readr::read_csv, *3*, *4*