Package 'qrmdata'

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Encoding UTF-8

Title Data Sets for Quantitative Risk Management Practice

Description Various data sets (stocks, stock indices, constituent data, FX, zero-coupon bond yield curves, volatility, commodities) for Quantitative Risk Management practice.

Author Marius Hofert [aut, cre], Kurt Hornik [aut]

Maintainer Marius Hofert <marius.hofert@uwaterloo.ca>

Depends R (>= 3.0.0)

Imports xts

Suggests knitr, qrmtools

Enhances

License GPL-2 | GPL-3

VignetteBuilder knitr

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commodities *Commodity Data*

Description

Data sets containing commodities.

Usage

```
data("OIL_Brent")
data("GOLD")
```

Format

`xts` objects containing the Brent Crude price in USD per barrel (for `OIL_Brent`) and the World Gold Council gold price in USD per troy ounce (for `GOLD`).

Author(s)

Marius Hofert

Source

The data was obtained from Federal Reserve Economic Data (FRED) via Quandl on 2016-01-03 with the function `get_data()` from **qrmtools**.

Examples

```
data("OIL_Brent")
data("GOLD")
```

fx *Foreign Exchange Rate Data*

Description

Foreign exchange rate data with respect to USD and GBP.

Usage

```
data("CAD_USD")
data("GBP_USD")
data("EUR_USD")
data("CHF_USD")
data("JPY_USD")
data("CNY_USD")
data("CAD_GBP")
data("USD_GBP")
data("EUR_GBP")
data("CHF_GBP")
data("JPY_GBP")
data("CNY_GBP")
```

Format

`xts` objects containing foreign exchange rates of Canadian Dollar (`CAD_*`), US Dollar (`USD_*`), British Pound (`GBP_*`), Euro (`EUR_*`), Swiss Francs (`CHF_*`), Japanese Yen (`JPY_*`), Chinese Yuan (`CNY_*`) with respect to USD (`*_USD`) and GBP (`*_GBP`) from 2000-01-01 to 2015-12-31.

Author(s)

Marius Hofert

Source

The data was obtained from OANDA (`http://www.oanda.com/`) on 2016-01-03 via the function `get_data()` from **qrmtools**.

Examples

```
data("CAD_USD")
data("GBP_USD")
data("EUR_USD")
data("CHF_USD")
data("JPY_USD")
data("CNY_USD")
data("CAD_GBP")
data("USD_GBP")
data("EUR_GBP")
data("CHF_GBP")
data("JPY_GBP")
data("CNY_GBP")
```

interest_rates *Interest-Rate Data*

Description

Zero-coupon bond yield curves in CAD and USD.

Usage

```
data("ZCB_CA")
data("ZCB_US")
```

Format

`xts` objects containing zero-coupon bond yield curves for times to maturity ranging from one to thirty years. Only trading days with available values for all maturities are included.

Author(s)

Marius Hofert

Source

`ZCB_CA` was obtained from http://www.bankofcanada.ca/rates/interest-rates/bond-yield-curves/ and `ZCB_US` was obtained from https://www.quandl.com/data/FED/SVENY-US-Treasury-Zero-Coupon-Yield-Curve via Quandl; both data sets were drawn on 2016-01-03 (`ZCB_US` via the function `get_data()` from **qrmtools**).

Examples

```
data("ZCB_CA")
data("ZCB_US")
```

stock_data *(Single) Stock Data*

Description

Single stock data; only Radioshack at the moment.

Usage

```
data("RSHCQ")
```

Format

An xts object containing adjusted close prices of Radioshack (RSHCQ; ticker symbol "RSHCQ") from 1982-01-04 to 2015-01-20.

Author(s)

Marius Hofert

Source

Radioshack defaulted early 2015. Yahoo Finance did not provide adjusted close prices thereafter. We thus used the adjusted close prices from 1982-01-04 to 2015-01-20 which we drew from Yahoo Finance on 2015-01-21 via the function `get_data()` from **qrmtools**.

Examples

```
data("RSHCQ")
```

---

stock_indices *Stock Index Data*

Description

Single stock indices.

Usage

```
data("SP500")
data("DJ")
data("NASDAQ")
data("FTSE")
data("SMI")
data("EURSTOXX")
data("CAC")
data("DAX")
data("CSI")
data("HSI")
data("SSEC")
data("NIKKEI")
```

Format

xts objects containing adjusted close prices of the S\&P 500 (SP500; ticker symbol "^GSPC"), Dow Jones (DJ; ticker symbol "^DJI"), NASDAQ 100 (NASDAQ; ticker symbol "^NDX"), FTSE 100 (FTSE; ticker symbol "^FTSE"), Swiss Market Index (SMI; ticker symbol "^SSMI"), Euro Stoxx 50 (EURSTOXX; ticker symbol "^STOXX50E"), Cotation Assistée en Continu (CAC; ticker symbol "^FCHI"), Deutscher Aktienindex (DAX; ticker sybmol "^GDAXI"), China Securities Index (CSI;

ticker sybmol "000300.SS"), Hang Seng Index (HSI; ticker symbol "^HSI"), Shanghai Stock Exchange Composite Index (SSEC; ticker symbol "000001.SS") and the NIKKEI (NIKKEI; ticker symbol "^N225") from their first date of availablility to 2015-12-31.

Author(s)

Marius Hofert

Source

The data was obtained from Yahoo Finance on 2016-01-03 via the function `get_data()` from **qrmtools**.

Examples

```
data("SP500")
data("DJ")
data("NASDAQ")
data("FTSE")
data("SMI")
data("EURSTOXX")
data("CAC")
data("DAX")
data("CSI")
data("HSI")
data("SSEC")
data("NIKKEI")
```

---

stock_indices_constituents

Stock Index Constituents Data

Description

Constituent data of various stock indices.

Usage

```
data("SP500_const")
data("DJ_const")
data("FTSE_const")
data("EURSTX_const")
data("HSI_const")
```

Format

xts objects containing adjusted close prices of the constituents of the respective stock indices. These are the S\&P 500 constituents (SP500_const with corresponding Global Industry Classification Standard (GICS) information SP500_const_info; see https://en.wikipedia.org/wiki/List_of_S%26P_500_companies) as of 2015-10-12, the Dow Jones constituents (DJ_const; see https://finance.yahoo.com/q/cp?s=%5EDJI) as of 2016-01-03, the FTSE 100 constituents (FTSE_const; see https://uk.finance.yahoo.com/q/cp?s=%5EFTSE) as of 2016-01-03 (the data was only available for 98 constituents), the Euro Stoxx 50 constituents (EURSTX_const; see https://uk.finance.yahoo.com/q/cp?s=%5ESTOXX50E) as of 2016-01-03 (the data was only available for 98 constituents) and the Hang Seng Index constituents (HSI_const; see https://uk.finance.yahoo.com/q/cp?s=%5EHSI) as of 2016-01-03.

The constituents data ranges from the first date at least one of the constituents is available (with missing data if not available) to 2015-12-31.

Author(s)

Marius Hofert

Source

The data was obtained from the respective URLs on 2016-01-03 via the function get_data() from **qrmtools**.

Note that for the S\&P 500 constituents, the data was rounded to two decimal places to reduce the file size of the data set.

Examples

```
data("SP500_const")
data("DJ_const")
data("FTSE_const")
data("EURSTX_const")
data("HSI_const")
```

---

volatility *Volatility Index*

Description

Volatility index data.

Usage

```
data("VIX")
```

Format

An xts object containing the volatility index (VIX; ticker symbol "^VIX") from its first date of availablility to 2015-12-31.

Author(s)

Marius Hofert

Source

The data was obtained from Yahoo Finance on 2016-01-03 via the function `get_data()` from **qrmtools**.

Examples

```
data("VIX")
```

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