Package 'seasonalityPlot'

October 14, 2022

Type Package

Title Seasonality Variation Plots of Stock Prices and Cryptocurrencies

Version 0.99.3

Description The price action at any given time is determined by investor
sentiment and market conditions. Although there is no established principle,
over a long period of time, things often move with a certain periodicity.
This is sometimes referred to as anomaly.
The seasonPlot() function in this package calculates and visualizes the
average value of price movements over a year for any given period.
In addition, the monthly increase or decrease in price movement is
represented with a colored background.
This seasonPlot() function can use the same symbols as the 'quantmod' package
(e.g. ^IXIC, ^DJI, SPY, BTC-USD, and ETH-USD etc).

Depends R (>= 4.0.0)

Imports magrittr, quantmod, dygraphs, plotrix, htmltools, grDevices,
graphics, zoo

Suggests testthat

License Artistic-2.0

Encoding UTF-8

RoxygenNote 7.1.2

URL <https://kumes.github.io/seasonalityPlot/>

NeedsCompilation no

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R topics documented:

seasonPlot	*seasonPlot: create seasonality variation plots for stock prices or cryptocurrencies*

Description

This function is to easily create seasonality variation plots of annual averages of stock prices or cryptocurrencies with some color options. This can use the same symbols as the 'quantmod' package. For the average calculation, the trading days for each month are aligned and then the percentages of change with the beginning of the year being zero are calculated. This function can set any given time period for averaging. In addition, years with many missing data are automatically excluded before the average calculation. The positive and negative monthly changes are shown in green and red background color, respectively.

Usage

```
seasonPlot(
  Symbols,
  StartYear = 2010,
  EndYear = 2020,
  LineColor = 1,
  xlab = "Month",
  BackgroundMode = TRUE,
  alpha = 0.05,
  OutputData = FALSE,
  Save = FALSE,
  output_width = 1000,
  output_height = 700,
  family = "Helvetica",
  PlotAll = FALSE
)
```

Arguments

Symbols	a character vector specifying the names of each symbol to be loaded. e.g. ^IXIC (NASDAQ Composite), ^DJI (Dow Jones Industrial Average), SPY (SPDR S&P500 ETF), BTC-USD (Bitcoin), ETH-USD (Ethereum), and XRP-USD (Ripple).
StartYear	a numeric of start year (Common Er)
EndYear	a numeric of end year (Common Er)
LineColor	a numeric between 1 and 4; The value 1 is to select red1, the value 2 is to select blue1, the value 3 is to select green1, and the value 4 is to select black. When BackgroundMode is TRUE, this argument is disabled.
xlab	a character of X-axis label.
BackgroundMode	a logical; draw a background color by react.
alpha	a numeric; The alpha parameter is a number between 0.0 (fully transparent) and 1.0 (fully opaque).

OutputData	a logical; output as a data.frame type or not.
Save	a logical; save as an image (PNG) or not
output_width	a output size of width (pixel). Initial value recommended.
output_height	a output size of height (pixel). Initial value recommended.
family	a character of font.
PlotAll	a logical; display all period by dygraph function or not.

Value

plot results

Author(s)

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Examples

```
## Plot seasonality of Bitcoin (BTC-USD)
seasonPlot(Symbols = "BTC-USD", StartYear=2015, EndYear=2020)
```

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