Refer to Link: <https://www.quantmod.com/>

**[quantmod: Quantitative Financial Modelling Framework](https://www.quantmod.com/)**

The **quantmod** package for [R](http://www.r-project.org/) is designed to assist the quantitative trader in the development, testing, and deployment of statistically based trading models.

It is possible with one quantmod function to load data from a variety of sources, including...

* [Yahoo! Finance](http://finance.yahoo.com/) (OHLC data)
* [Federal Reserve Bank of St. Louis FRED®](http://research.stlouisfed.org/fred2/) (11,000 economic series)
* [Google Finance](http://finance.google.com/) (OHLC data)
* [Oanda, The Currency Site](http://www.oanda.com/) (FX and Metals)
* [MySQL databases](http://www.mysql.com/) (Your local data)
* R binary formats (.RData and .rda)
* Comma Separated Value files (.csv)
* More to come including (RODBC,~~economagic~~,Rbloomberg,...)

Getting Data:

getSymbols(“name\_stock”) by default source is Yahoo! Finance

eg: getSymbols(“AAPL”) # For Apple Stock Price Refer to Program

**The OHLC Basics**

The basic functions make life easier. Assuming some standard naming conventions quantmod makes available 3 primary types of column extraction functions. If you're looking for the open, the high, or the series low - it's available:

* **Op**,**Hi**,**Lo**,**Cl**,**Vo**,**Ad** - do pretty much what they say - extract the columns Open, High, Low, Close, Volume, and Adjusted (Yahoo)
* **is.OHLC**, **has.OHLC**, **has.Op**,**has.Cl**,**has.Hi**,**has.Lo**,**has.Ad**, and **has.Vo** - fairly obvious
* **seriesHi** and **seriesLo**

#### Financial Charts in quantmod:

1. [The workhorse: **chartSeries**](https://www.quantmod.com/examples/charting/#chartseries)
2. [Meet the friends: **barChart**, **candleChart**, and **lineChart**](https://www.quantmod.com/examples/charting/#variants)
3. [Chart Arguments: what can you do?](https://www.quantmod.com/examples/charting/#arguments)
4. [Voodoo: Technical Analysis with **TTR** and **addTA**](https://www.quantmod.com/examples/charting/#technicals)

Most of the charting functionality is designed to be used interactively.

**Federal Reserve Economic Data (FRED)**

The getSymbols() can be used to download macroeconomic data from the **Federal Reserve Economic Data (FRED) database**.

Terms Used in Example:

**UNRATE** refers to the monthly civilian unemployment rate in percentage,

**CPIAUCSL** is the ticker for the monthly Consumer Price Index (CPI) all urban consumers seasonally adjusted,

**GDPC1**points to the quarterly real Gross Domestic Product (GDP) seasonally adjusted.