# Accessing Financial Data with R

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#### Abstract

Financial data analysis with R requires access to financial data. This document will demonstrate a variety of ways to to access free financial data from the internet. We will also discuss accessing financial data downloaded from some commercial financial databases.

## 1 The getSymbols function from the quantmod package

Probably the most useful function for retrieving financial data from the internet is the getSymbols function from the quantmod package. The function getSymbols can download data from Yahoo Finance, Google Finance, the Federal Reserve's FRED database, and Oanada. The function can also read data from MySQL databases, .csv files, and .RData files.

The following code chuck shows the arguments of the function.

```
library(quantmod)
args(getSymbols)

## function (Symbols = NULL, env = parent.frame(), reload.Symbols = FALSE,
## verbose = FALSE, warnings = TRUE, src = "yahoo", symbol.lookup = TRUE,
## auto.assign = getOption("getSymbols.auto.assign", TRUE),
## ...)
## NULL
```

The key arguments are summarized as follows:

Symbols character vector of ticker systems to download (this is the only required argument)

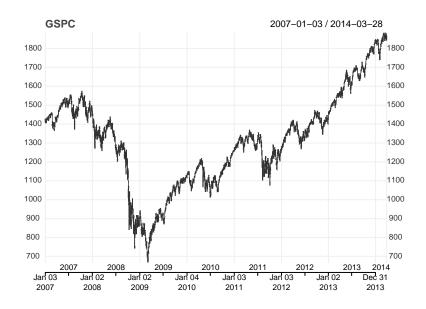
src data source: yahoo (default), google, MySQL, FRED, csv, RData, and oanda

#### 1.1 Downloading data from Yahoo Finance

The following code chunk demonstrates how to download the S&P 500 index data from Yahoo Finance, the default data source.

```
getSymbols("^GSPC")
chart_Series(GSPC)
```

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### 1.2 Downloading data from the Federal Reserve's FRED database

The Federal Reserve's FRED database (http://research.stlouisfed.org/) contains more than 150,000 US and international financial and economic time series.

The following code chunk demonstrates how to download the 3-month Treasury Bill rate from FRED.

```
getSymbols("DGS3MO", src = "FRED")
## [1] "DGS3MO"

plot(DGS3MO, main = "3-Month Treasury Constant Maturity Rate", cex.main = 0.75)
```

#### 3-Month Treasury Constant Maturity Rate

