

# Time Series Database Interface: TSgetSymbol wrapper to getSymbols

October 28, 2011

## 1 Introduction

The code from the vignette that generates this guide can be loaded into an editor with `edit(vignette("TSgetSymbol"))`. This uses the default editor, which can be changed using `options()`. It should be possible to view the pdf version of the guide for this package with `print(vignette("TSgetSymbol"))`.

Once R is started, the functions in this package are made available with

```
> library("TSgetSymbol")
```

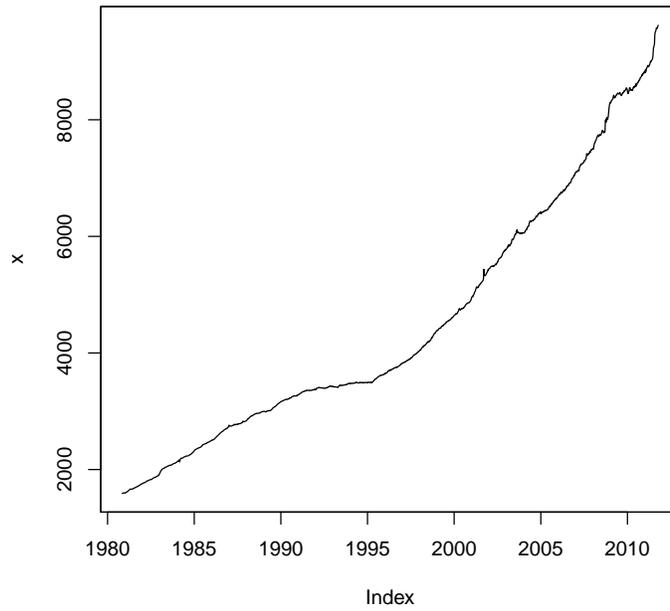
This will also load required packages *TSdbi*, *DBI*, *methods*, *tframePlus*, *zoo*, and *quantmod*.

*TSgetSymbol* is just a wrapper to *getSymbols* in *quantmod*. It does not provide extra functionality, only an interface that is consistent with *TSdbi*. *TSgetSymbol* does not support writing data.

### 1.1 Examples Using TSgetSymbol with FRED

A connection can be used to get data from the Federal Reserve Bank of St.Louis. (Look at <http://research.stlouisfed.org/fred2/> to find series identifiers.)

```
> con <- TSconnect("getSymbol", dbname = "FRED")
> x <- TSget("M2", con)
> plot(x)
```

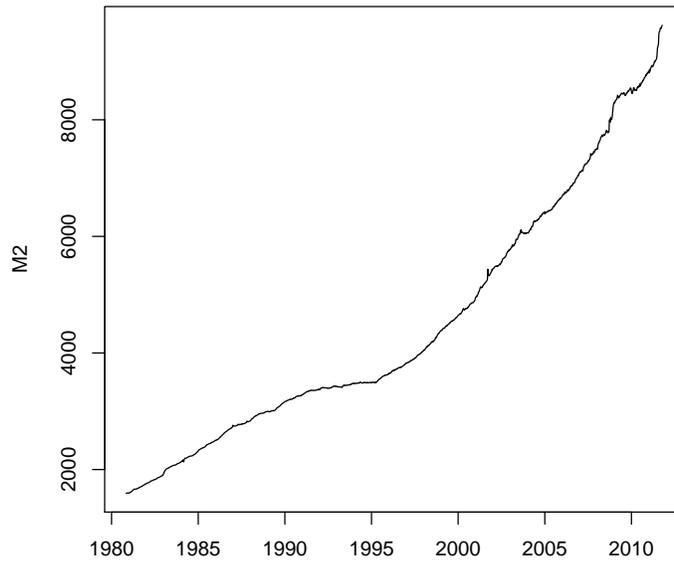


```
> tfplot(x)
> TSrefperiod(x)

NULL

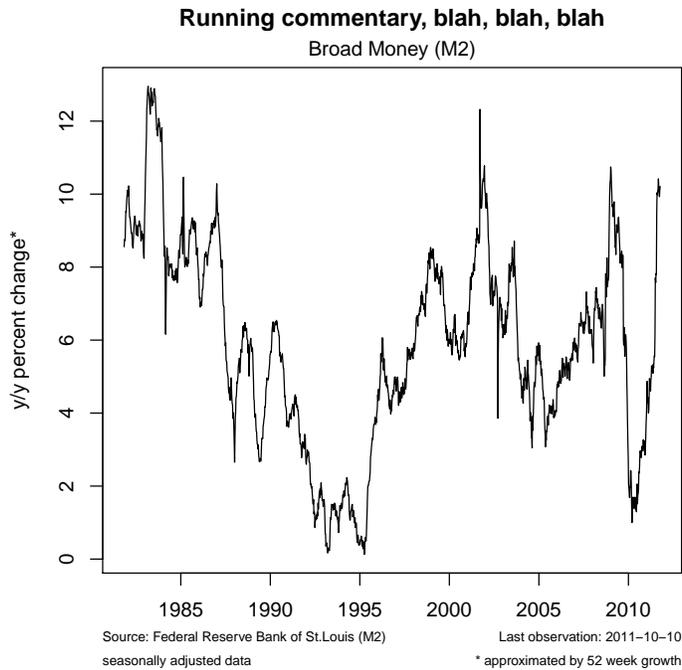
> TSdescription(x)

[1] "M2 from FRED"
```



It is also possible to specify a connection to be used as the default:

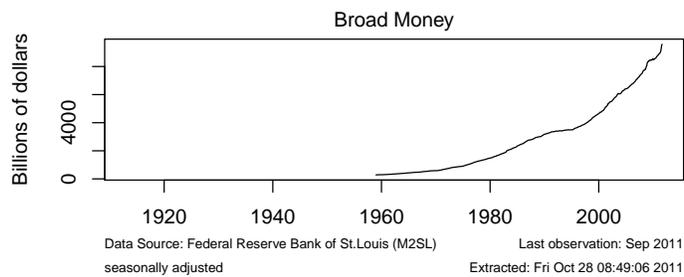
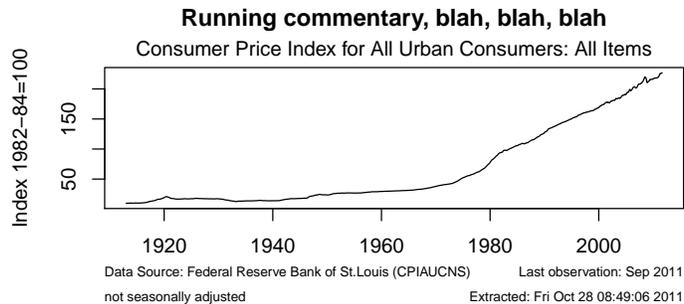
```
> options(TSconnection = con)
> tfOnePlot(percentChange(TSget(serIDs = "M2"), lag = 52), Title = "Running commentary, bla",
  subtitle = "Broad Money (M2)", ylab = "y/y percent change*",
  source = "Source: Federal Reserve Bank of St.Louis (M2)",
  footnoteLeft = "seasonally adjusted data", footnoteRight = "* approximated by 52 week",
  lastObs = TRUE)
```



It is also possible to return multiple series, but beware that the FRED series called M2 is a weekly series, whereas CPIAUCNS is monthly. Binding together series of different frequency may fail, or produce strange results.

```
> x <- TSget(c("CPIAUCNS", "M2SL"), con)
> tfplot(x, Title = "Running commentary, blah, blah, blah", subtitle = c("Consumer Price Inc
  "Broad Money"), ylab = c("Index 1982-84=100", "Billions of dollars"),
  source = c("Data Source: Federal Reserve Bank of St.Louis (CPIAUCNS)",
    "Data Source: Federal Reserve Bank of St.Louis (M2SL)"),
  footnoteLeft = c("not seasonally adjusted", "seasonally adjusted"),
  footnoteRight = paste("Extracted:", date()), lastObs = TRUE)
> TSdescription(x)

[1] "CPIAUCNS from FRED" "M2SL from FRED"
```

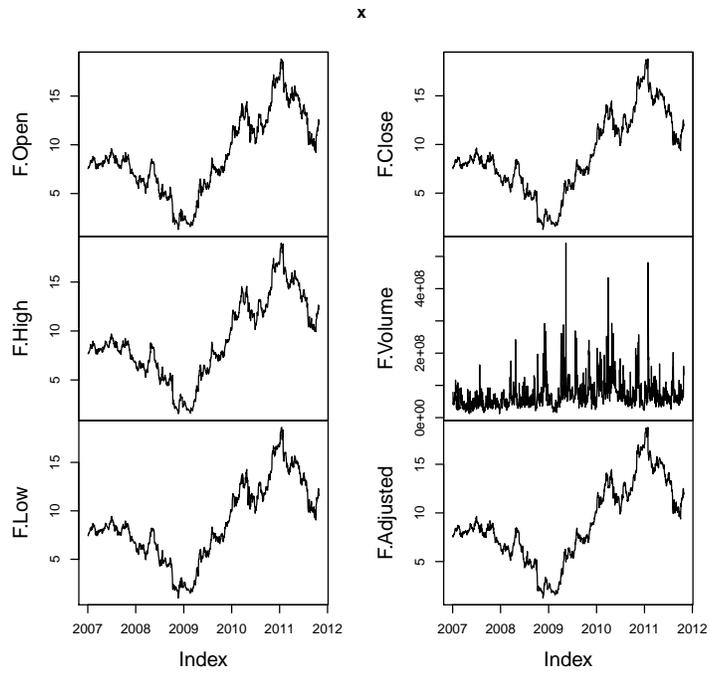


```
> TSdates(c("CPIAUCNS", "M2SL"), con)
```

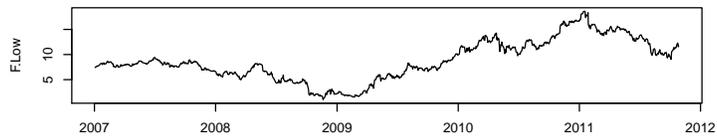
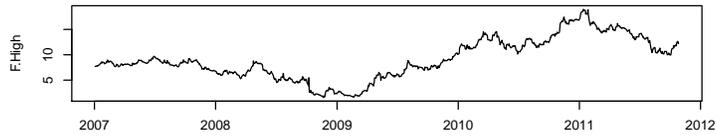
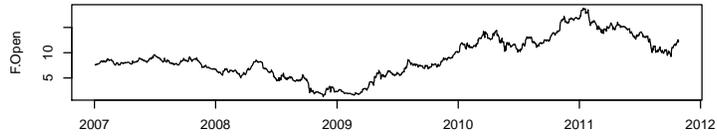
```
      [,1]
[1,] "CPIAUCNS from 1913 1 to 2011 9      12"
[2,] "M2SL from 1959 1 to 2011 9        12"
```

The following connects to yahoo and loads Ford. This is a multivariate time series with open, close, etc. Set *par(ask=TRUE)* here if you want to stop and prompt for <Return> between pages in the graphics output.

```
> yahoo <- TSconnect("getSymbol", dbname = "yahoo")
> x <- TSget("F", con = yahoo)
> plot(x)
```



```
> tfplot(x, graphs.per.page = 3)
```



See the *TSdbi* vignette for additional details.