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")
```

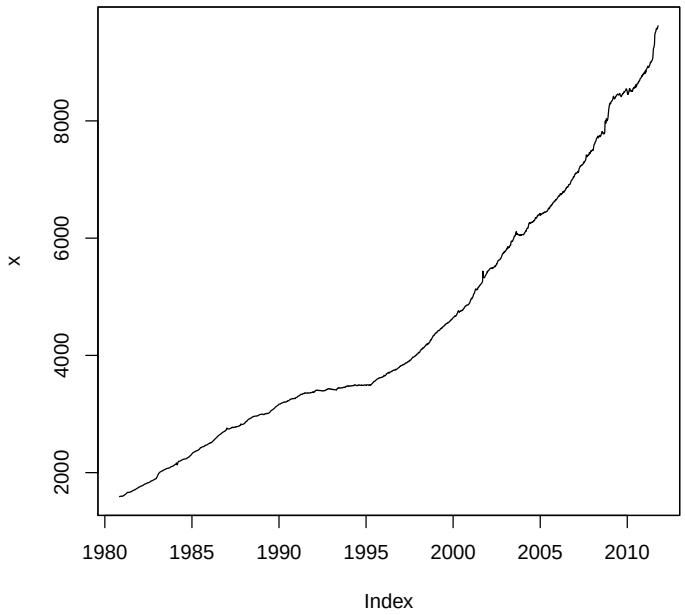
This will also load required packages *TSdbi*, *DBI*, *methods*, *tframePlus*, *zoo*, and *quantmod*.

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.

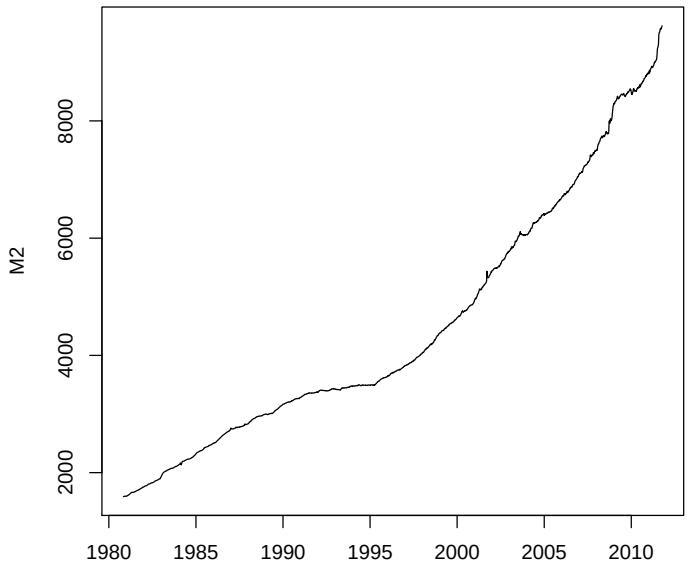
1.1 Examples Using TSgetSymbol with FRED

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)
```

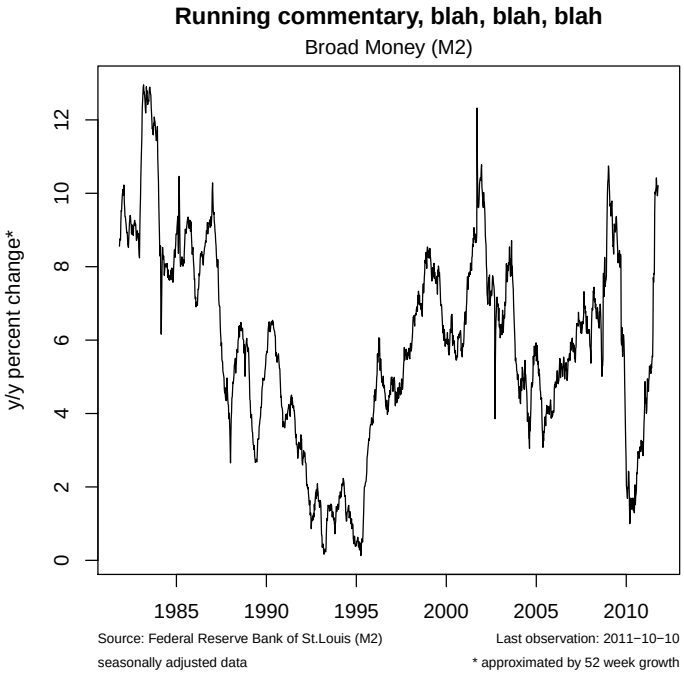



```
> tfplot(x)
> TSrefperiod(x)

NULL

> TSdescription(x)

[1] "M2  from  FRED"
```



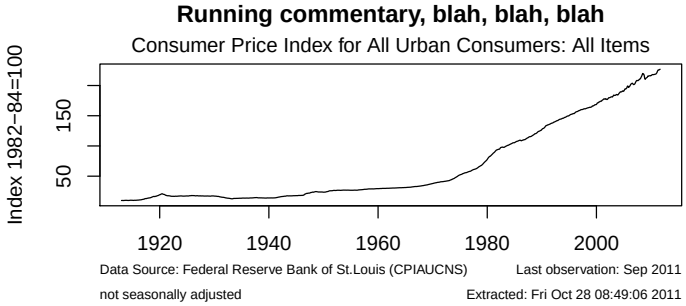
It is also possible to specify a connection to be used as the default:

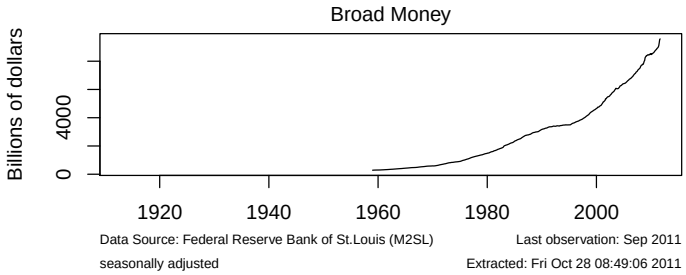
```
> options(TSconnection = con)
> tfOnePlot(percentChange(TSget(serIDs = "M2"), lag = 52), Title = "Running commentary, blah
      subtitle = "Broad Money (M2)", ylab = "y/y percent change*",
      source = "Source: Federal Reserve Bank of St.Louis (M2)",
      footnoteLeft = "seasonally adjusted data",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

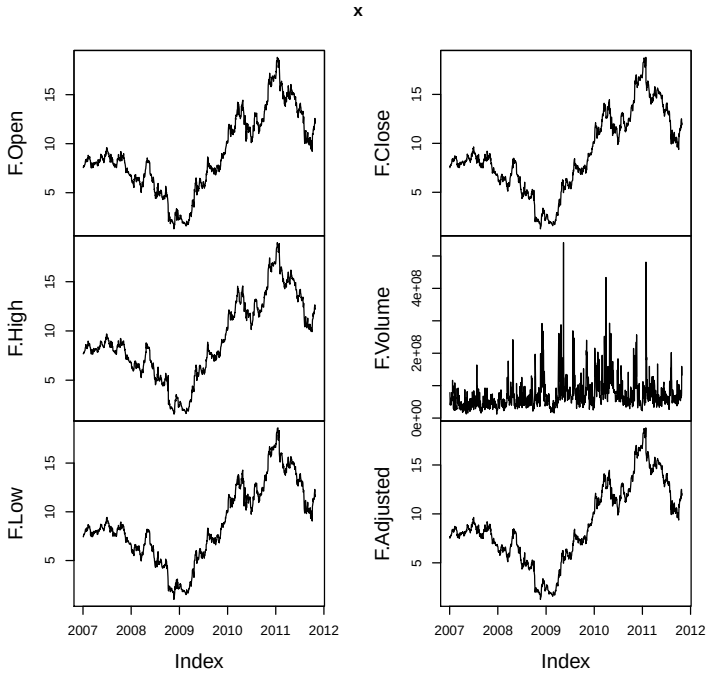




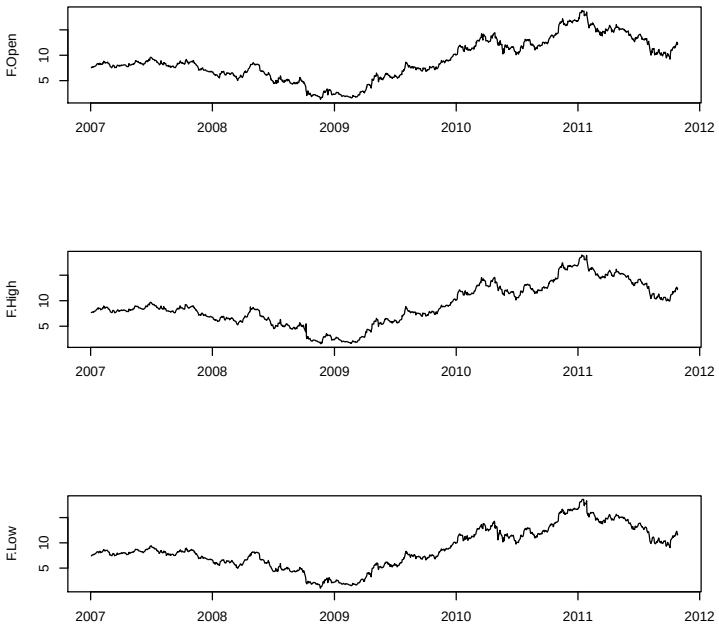

```
> TSdates(c("CPIAUCNS", "M2SL"), con)

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

The folowing 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.