

Introduction to Financial Risk Management (with R)

Exercise 2 – Retrieving data from FRED

Overview

The goal of this exercise is to use R to retrieve some datasets from FRED, which is the database maintained by the Federal Reserve Bank of St Louis, using the R package “quantmod”.

Installing R Package: quantmod

Follow the instructions below to install the “quantmod” package in R.

- Open RStudio.

- Click on “Tools” on the menu bar at the top of the page.

- Click on “Install Packages” in the dropdown menu.

- Type “quantmod” in the space below the line “Packages (separate multiple with space of comma)”

- Then hit the “Enter” key.

Retrieve the Wilshire 5000 Index from FRED

In the lecture, we retrieved and displayed the Wilshire 5000 Total Market Index from FRED. This is how it was done. Type in the following R script into the “command window” which is the top left panel of RStudio.

```
library(quantmod)
wilsh<-getSymbols("WILL5000IND",src="FRED",auto.assign=FALSE)
wilsh <- na.omit(wilsh)
wilsh <- wilsh["1979-12-31/2017-12-31"]
names(wilsh) <- "TR"
head(wilsh,3)
tail(wilsh,3)
```

Retrieve Gold Prices from FRED

In this exercise, we will perform the same tasks on gold prices.

First, retrieve the following data from FRED:

“GOLDPMGBD228NLBM”

This is the price of gold in the London Bullion Market at 3pm each business day.

Second, remove all “NA” observations from this series.

Third, restrict the dates of the series from 1979-12-31 to 2017-12-31.