auxPort

The package auxPort provides various functions necessary fo cleaning stock data, optimizing portfolios, and evaluating their performance.

Installation

You can install this version of the package from Github with:

```
install.packages("devtools")
library(devtools)
install_github("antshi/auxPort")
```

Examples

These are basic examples to show you how to use the some of the functionality.

Example 1: Data Cleaning

```
library(auxPort)
```

```
## Warning: replacing previous import 'CVXR::constraints<-' by 'ROI::constraints<-'
## when loading 'auxPort'
```

```
## Warning: replacing previous import 'CVXR::objective<-' by 'ROI::objective<-'
## when loading 'auxPort'
```

```
## Warning: replacing previous import 'CVXR::constraints' by 'ROI::constraints'
## when loading 'auxPort'
```

```
## Warning: replacing previous import 'CVXR::objective' by 'ROI::objective' when
## loading 'auxPort'
```

```
dates <-  as.Date(sp500[,1], format="%d.%m.%Y", stringsAsFactors=FALSE)
find_weekends(dates)
```

```
## integer(0)
```

```
prices <- as.matrix(sp500[,-1])
find_nas(prices, all=FALSE)
```

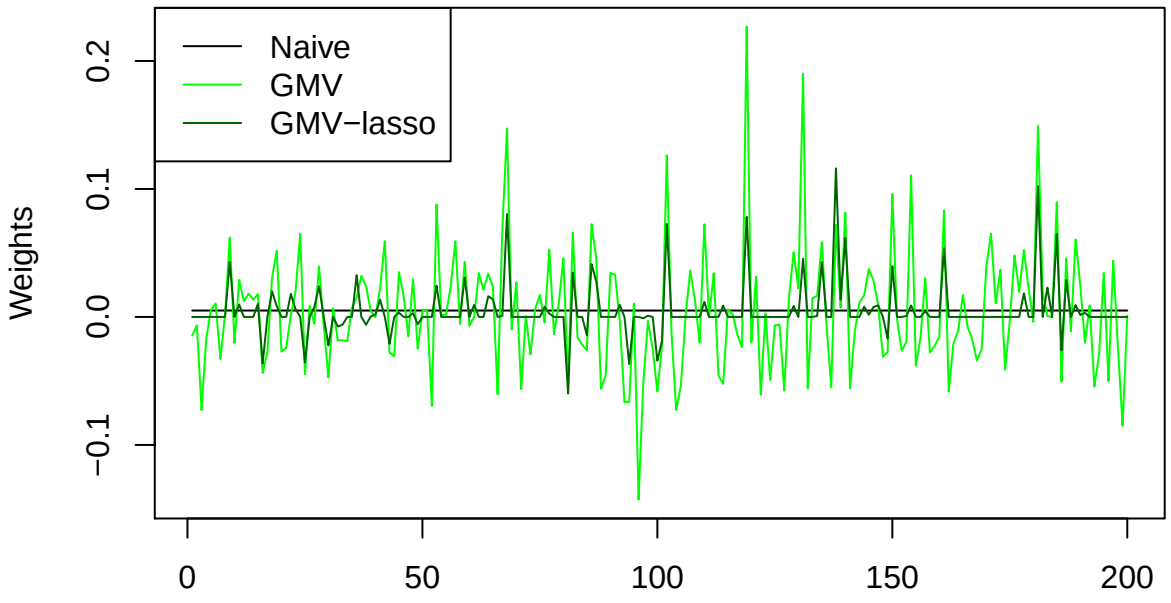
```
## JEFFERSON.PILOT.DEAD...21.04.06
##                             235
```

```
find_nas(prices, all=TRUE)
```

```
## integer(0)
```

Example 2: Portfolio Optimization

```
returns <- sp500_rets[,-1]
Sigma <- cov(returns)
naive <- port_estim_naive(Sigma)
gmv <- port_estim_gmv(Sigma)
gmv_lasso <- port_estim_solver(Sigma, lambda1=0.0001)
matplot(cbind(naive, gmv, gmv_lasso), type="l", col=c("black", "green", "darkgreen"), lty=1, lwd=1, ylab
legend("topleft", legend=c("Naive", "GMV", "GMV-lasso"), col=c("black", "green", "darkgreen"), lty=1, lw
```


Naive
GMV
GMV−lasso
Weights
0.2
0.1
0.0
−0.1
0
50
100
150
200