# Stock Performance

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```
#install packages
#install.packages("tidyverse")
#install.packages("PerformanceAnalytics")
#install.packages("quantmod")
library(tidyverse)
```

```
## -- Attaching packages --------------------------------------- tidyverse 1.3.2 --
## v ggplot2 3.3.6      v purrr   0.3.5
## v tibble  3.1.8      v dplyr   1.0.10
## v tidyr   1.2.1      v stringr 1.4.1
## v readr   2.1.3      v forcats 0.5.2
## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
library(PerformanceAnalytics)
```

```
## Loading required package: xts
## Loading required package: zoo
##
## Attaching package: 'zoo'
##
## The following objects are masked from 'package:base':
##
##     as.Date, as.Date.numeric
##
##
## Attaching package: 'xts'
##
## The following objects are masked from 'package:dplyr':
##
##     first, last
##
##
## Attaching package: 'PerformanceAnalytics'
##
## The following object is masked from 'package:graphics':
##
##     legend
```

```
library(quantmod)
```

```
## Loading required package: TTR
## Registered S3 method overwritten by 'quantmod':
```

```
##   method            from
##   as.zoo.data.frame zoo
```

```
tickets <- c('KTB.BK', 'KBANK.BK', 'BBL.BK', 'BAY.BK')
getSymbols(tickets, src='yahoo', from=Sys.Date()-1095)
```

```
## [1] "KTB.BK"   "KBANK.BK" "BBL.BK"   "BAY.BK"
```

```
closing_price <- cbind(KTB.BK[,6], KBANK.BK[,6], BBL.BK[,6], BAY.BK[,6]) |> round(2)

return_price <- cbind(
  KTB <- weeklyReturn(KTB.BK, type = 'log'),
  KBANK <- weeklyReturn(KBANK.BK, type = 'log'),
  BBL <- weeklyReturn(BBL.BK, type = 'log'),
  BAY <- weeklyReturn(BAY.BK, type = 'log')
) |> round(2)


#change column name
colnames(return_price) <- c('KTB', 'KBANK', 'BBL', 'BAY')

#Calculate Value at Risk
CVaR(return_price, p=0.99) |> round(2)
```

```
##      KTB KBANK   BBL   BAY
## ES -0.16 -0.23 -0.17 -0.27
```

```
#plot
PerformanceAnalytics::charts.PerformanceSummary(return_price,
                                                Rf=0.01, main = "Local Comercial BANK Return Performanc
```