Evaluacion del Retorno de un Portafolio

R con Enfoque Financiero: AulaABA

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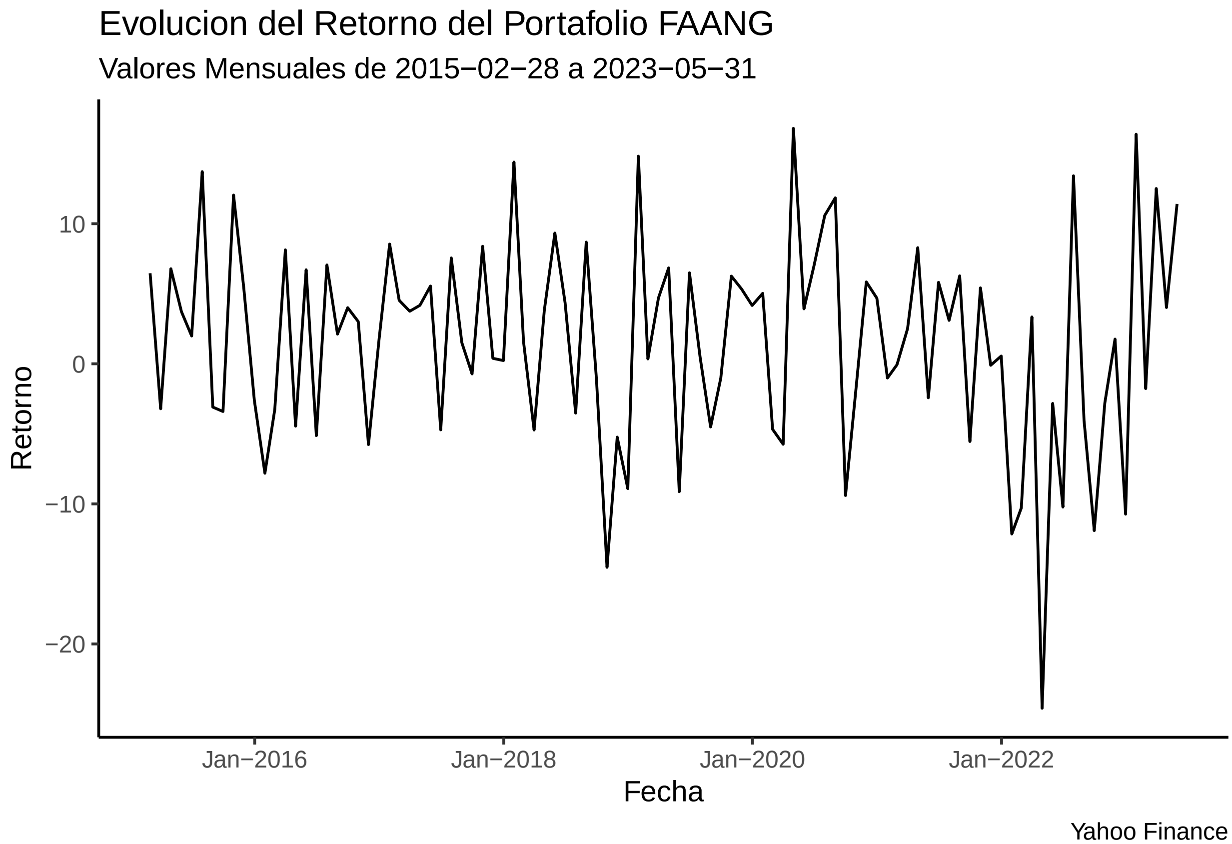
Evolucion de los Retornos del Portafolio

Luego de que tenemos nuestro portafolio, analizamos los retornos del mismo.

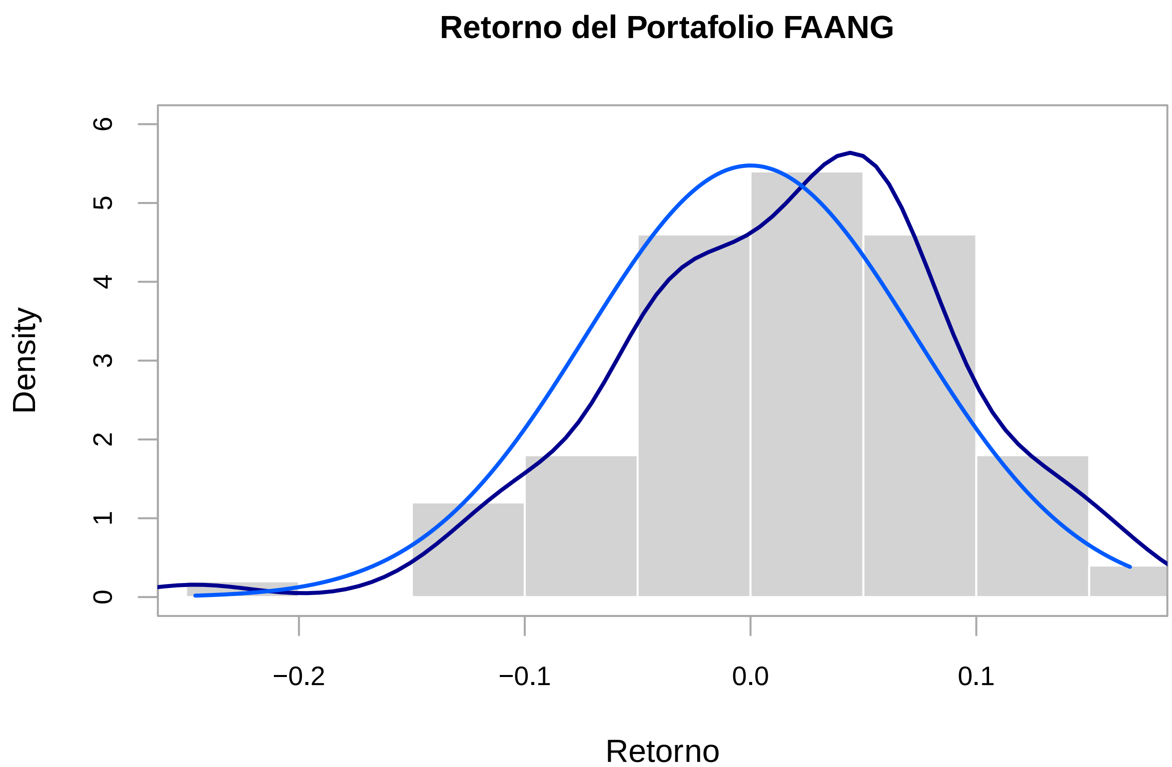
```r
suppressWarnings(suppressPackageStartupMessages(library(PerformanceAnalytics)))
suppressWarnings(suppressPackageStartupMessages(library(quantmod)))
suppressWarnings(suppressPackageStartupMessages(library(tidyverse)))

FAANG <- readRDS("portafolio_FAANG_EW.rds")
retornos_portf_faang <- FAANG$returns %>%
  data.frame(fecha= index(.)) %>%
  remove_rownames()

  retorno_FAANG <-  ggplot(data = retornos_portf_faang,
                           aes(x = fecha, y = portfolio.returns*100)) +
    geom_line() +
    scale_x_date(date_labels = "%b-%Y")  +
    labs(title= "Evolucion del Retorno del Portafolio FAANG",
         subtitle =  paste("Valores Mensuales de", min(retornos_portf_faang$fecha),
                           "a", max(retornos_portf_faang$fecha)),
         x= "Fecha",
         y= "Retorno",
         caption= "Yahoo Finance") +
    theme_classic() +
    theme(legend.position = "none",
          legend.title = element_blank()) +
    theme_classic()
  plot(retorno_FAANG)
```


Evolucion del Retorno del Portafolio FAANG
Valores Mensuales de 2015−02−28 a 2023−05−31
Retorno
10
0
−10
−20
Jan−2016
Jan−2018
Jan−2020
Jan−2022
Fecha
Yahoo Finance

Distribucion de los Retornos



Comparacion con el SP&500

```r
sp500 <- Cl(readRDS("retornos_mensuales_SP&500.rds"))
benchmark_returns <- cbind(sp500,
                           retornos_portf_faang$portfolio.returns)
colnames(benchmark_returns) <- c("SP&500","FAAG_PORT")
head(benchmark_returns)
```

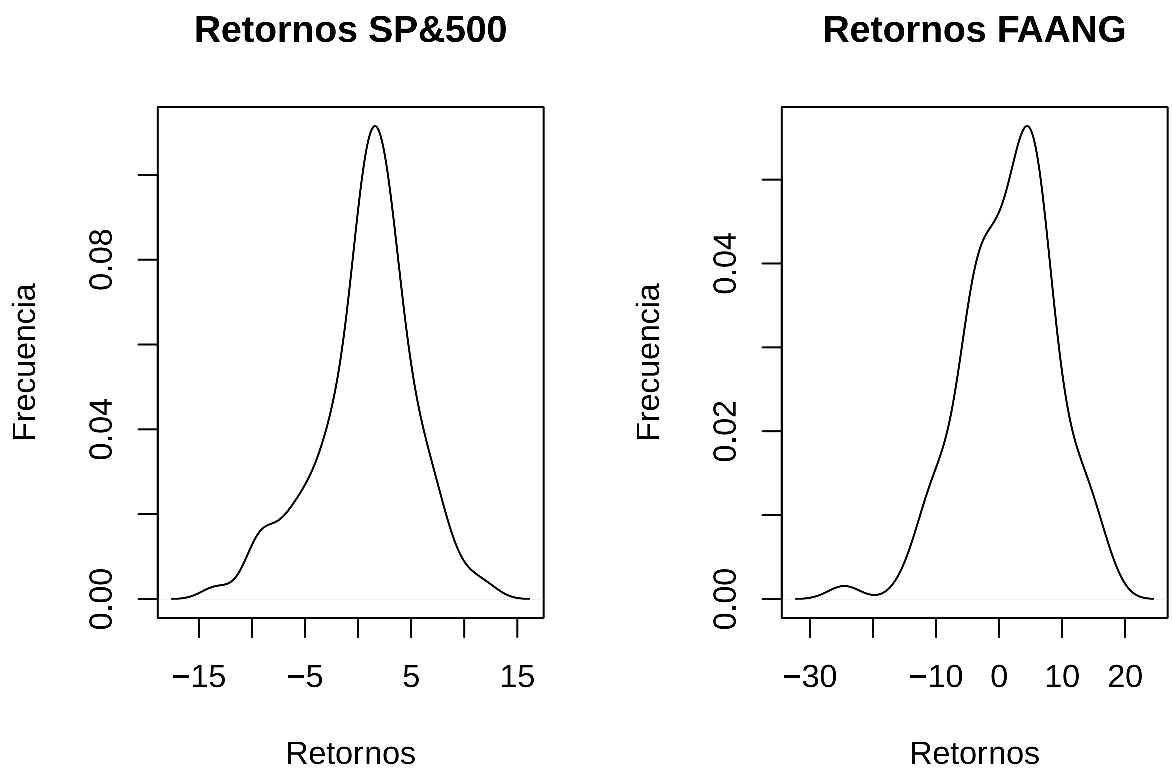
```
##                  SP&500   FAAG_PORT
## 2015-02-28  0.053438876  0.06464064
## 2015-03-31 -0.017549197 -0.03212579
## 2015-04-30  0.008484723  0.06784338
## 2015-05-31  0.010436730  0.03720847
## 2015-06-30 -0.021235559  0.01983477
## 2015-07-31  0.019549683  0.13718148
```

```r
par(mfrow= c(1,2))

plot(density(benchmark_returns$`SP&500`*100),
     main = "Retornos SP&500",
     xlab = "Retornos",
```

```
     ylab= "Frecuencia")

plot(density(benchmark_returns$FAAG_PORT*100),
     main = "Retornos FAANG",
     ylab= "Frecuencia",
     xlab= "Retornos")
```




```
data.frame(table.AnnualizedReturns(benchmark_returns))
```

```
##                           SP.500 FAAG_PORT
## Annualized Return         0.0790    0.1734
## Annualized Std Dev        0.1579    0.2524
## Annualized Sharpe (Rf=0%) 0.5004    0.6870
```

```
charts.PerformanceSummary(benchmark_returns,
              main= "Desempeño del SP&500 y las Acciones FAANG")
```

Desempeño del SP&500 y las Acciones FAANG