

# Financial Data Analysis

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# Data

## Raw Data

```
#political shocks
raw_truths <- read.csv(here("data/political_data", "trump_all_truths.csv"))
raw_tweets <- read.csv(here("data/political_data", "tweets.csv"))

#market prices
raw_ONEQ <- read.csv(here("data/market_data", "ONEQ.csv")) #USA
raw_SMI <- read.csv(here("data/market_data", "SMI.csv")) #CH
raw_SPY <- read.csv(here("data/market_data", "SPY.csv")) #USA
raw_VTHR <- read.csv(here("data/market_data", "VTHR.csv")) #
raw_VTI <- read.csv(here("data/market_data", "VTI.csv")) #
raw_VGK <- read.csv(here("data/market_data", "VGK.csv")) #
raw_DAX <- read.csv(here("data/market_data", "DAX.csv")) #DE
raw_ASHR <- read.csv(here("data/market_data", "ASHR.csv")) #CHINA
```

## Quick Analysis

### SPY April 2nd 2025

```
#extract a particular day
day_SPY_0402 = day_selector(raw_SPY,2025,04,02) #april 2nd 2025

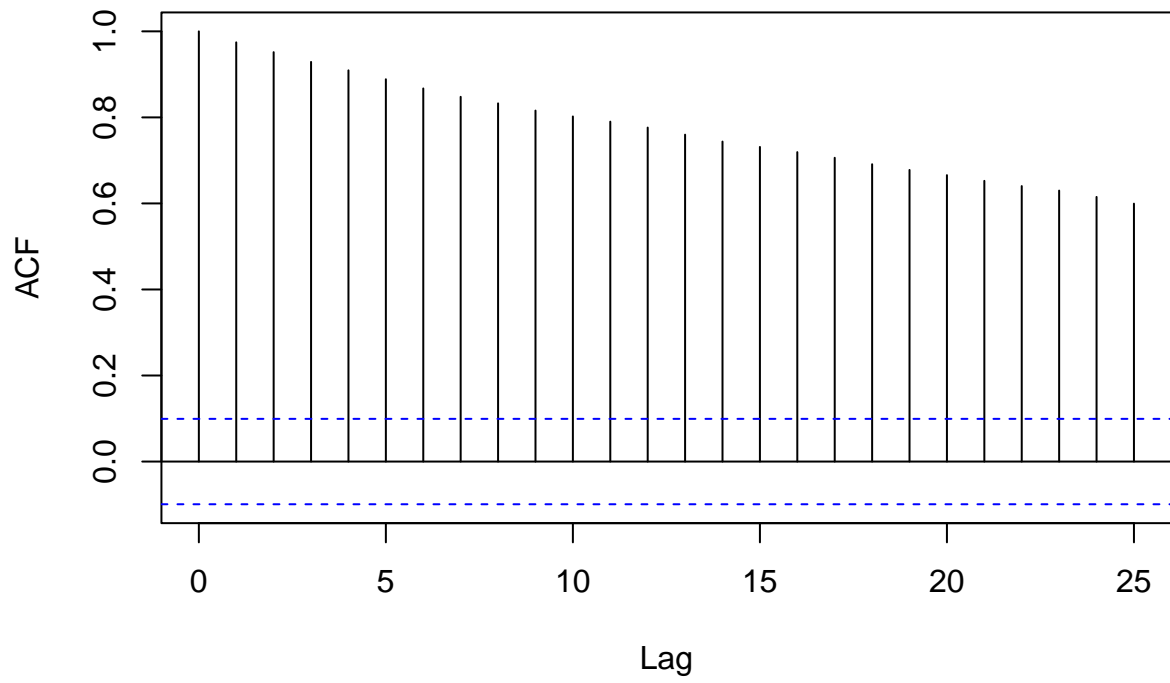
#let's plot it
day_plotter(day_SPY_0402,"SPY Price on April 2nd 2025")
```

SPY Price on April 2nd 2025

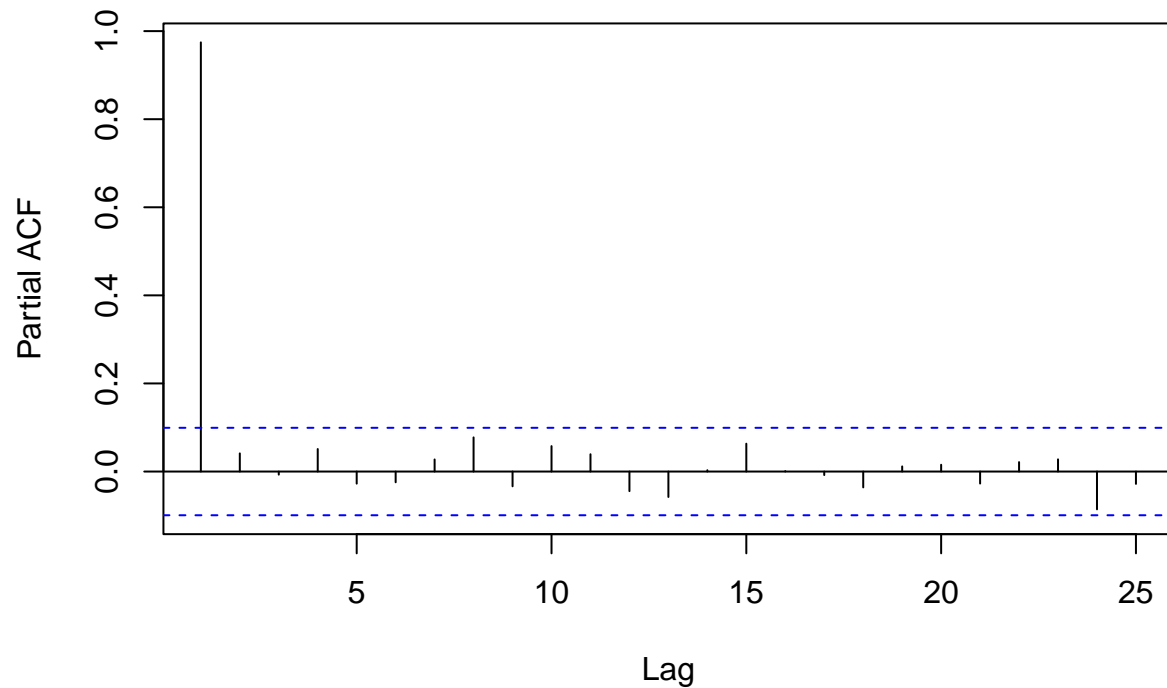


```
#quickly test some ARMA specifications  
quick_arma(day_SPY_0402,1,0,0) #checking AR1,AR2,AR3
```

**Series data\$close**



## Series data\$close



```
##
##                                     AR Estimations
##
##                                AR-1          AR-2          AR-3
##
##      ar1              0.9975        0.9728            1.4609
##                        (0.0030)       (0.0514)         (NaN)
##      intercept    561.0971     561.3655     562.5635
##                        (3.2897)       (3.4352)         (22.1897)
##      ar2                                  0.0249         0.0770
##                                           (0.0515)         (0.0013)
##      ar3                                          -0.5386
##                                           (0.0007)
##
##      nobs             390           390           390
##      sigma            0.2854        0.2853         0.3414
##      logLik           -67.0847     -66.9808     -135.4359
##      AIC              140.1693     141.9615     280.8718
##      BIC              152.0678     157.8261     300.7025
##      nobs.1           390.0000     390.0000     390.0000
##
##
##      *** p < 0.001; ** p < 0.01; * p <
##      0.05.
##
## Column names: names, AR-1, AR-2, AR-3
##                               Checking Residuals
##
```

```
##              AR-1 Residuals  AR-2 Residuals  AR-3 Residuals
##
##      (Intercept)      0.0302 *      0.0291 *      -0.0051
##                      (0.0145)      (0.0145)      (0.0171)
##      REG1res_lagged    -0.0476
##                      (0.0510)
##      REG2res_lagged          -0.0217
##                      (0.0511)
##      REG3res_lagged          -0.1733 ***
##                      (0.0503)
##
##      N                389                389                389
##      R2                0.0022              0.0005              0.0297
##
##      *** p < 0.001; ** p < 0.01; * p < 0.05.
##
## Column names: names, AR-1 Residuals, AR-2 Residuals, AR-3 Residuals
```

```
#quick_arma(day_SPY_0402,2,0,0) #checking AR2,AR3,AR4
```