

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

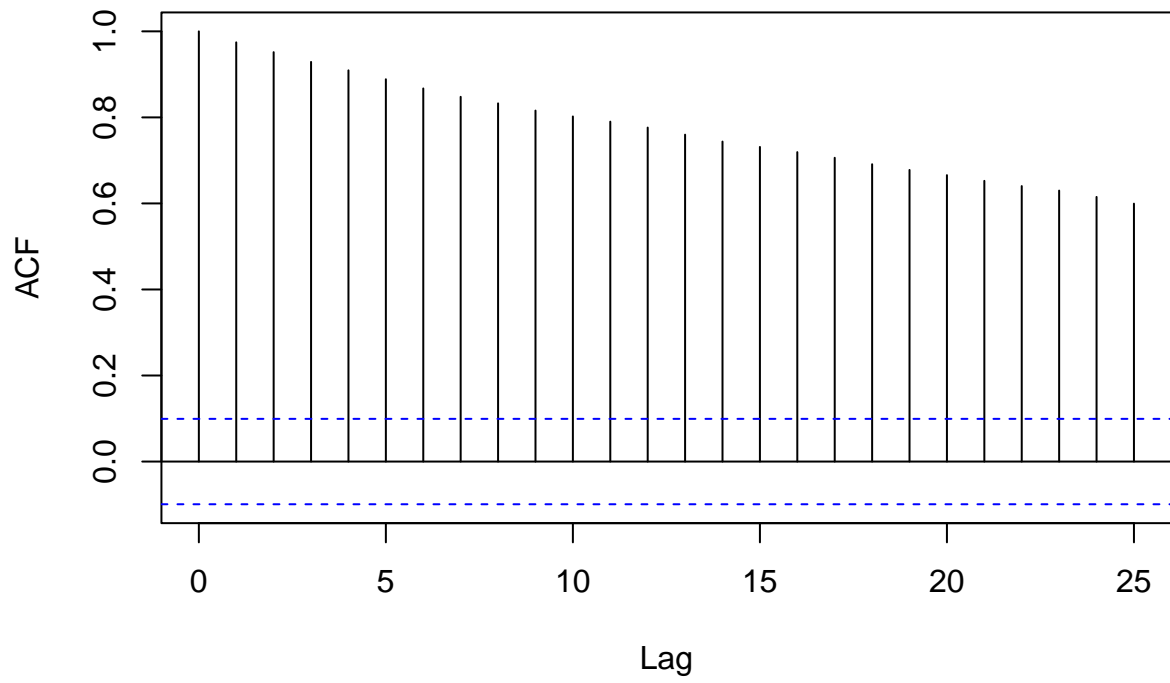
#let's plot it
day_plotter(day_SPY_0402,"SPY Price on April 2nd 2025")
```

SPY Price on April 2nd 2025

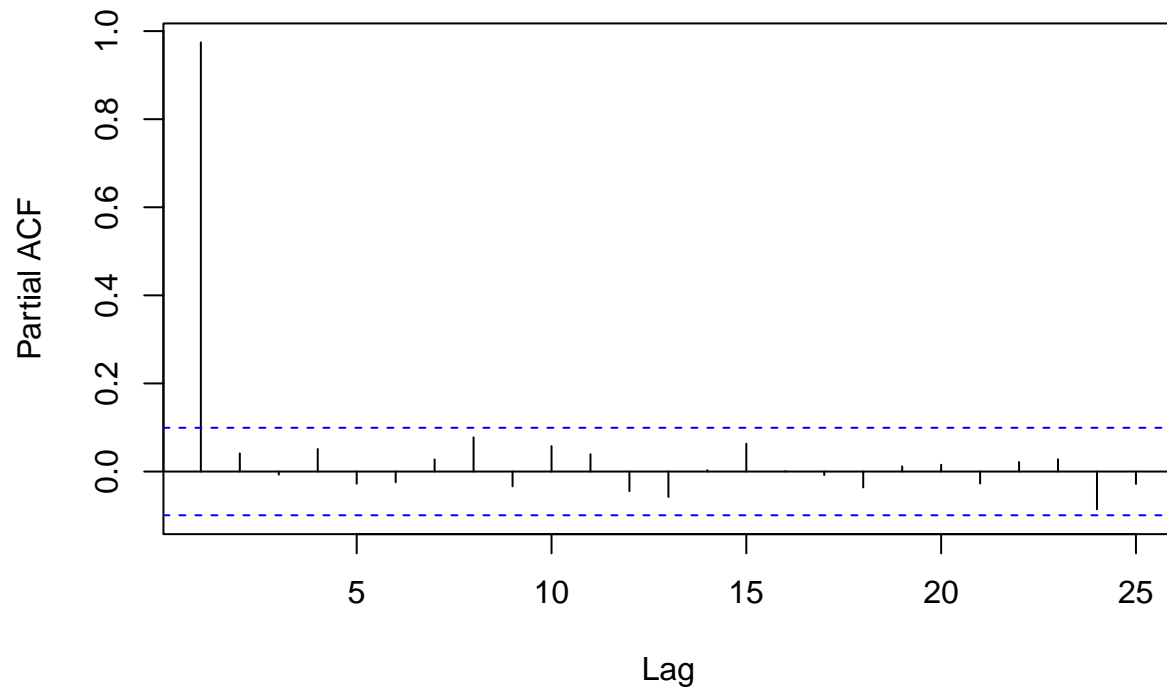


```
#quickly test some ARMA specifications  
quick_arma(day_SPY_0402,1,0,0) #checking AR1,AR2,AR3
```

Series data\$close



Series data\$close



```
## [[1]]
##
##               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
##
```

```
## [[2]]
##
##           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
```