Business Intelligence per i Servizi Finanziari

Quaggio Stefano 866504

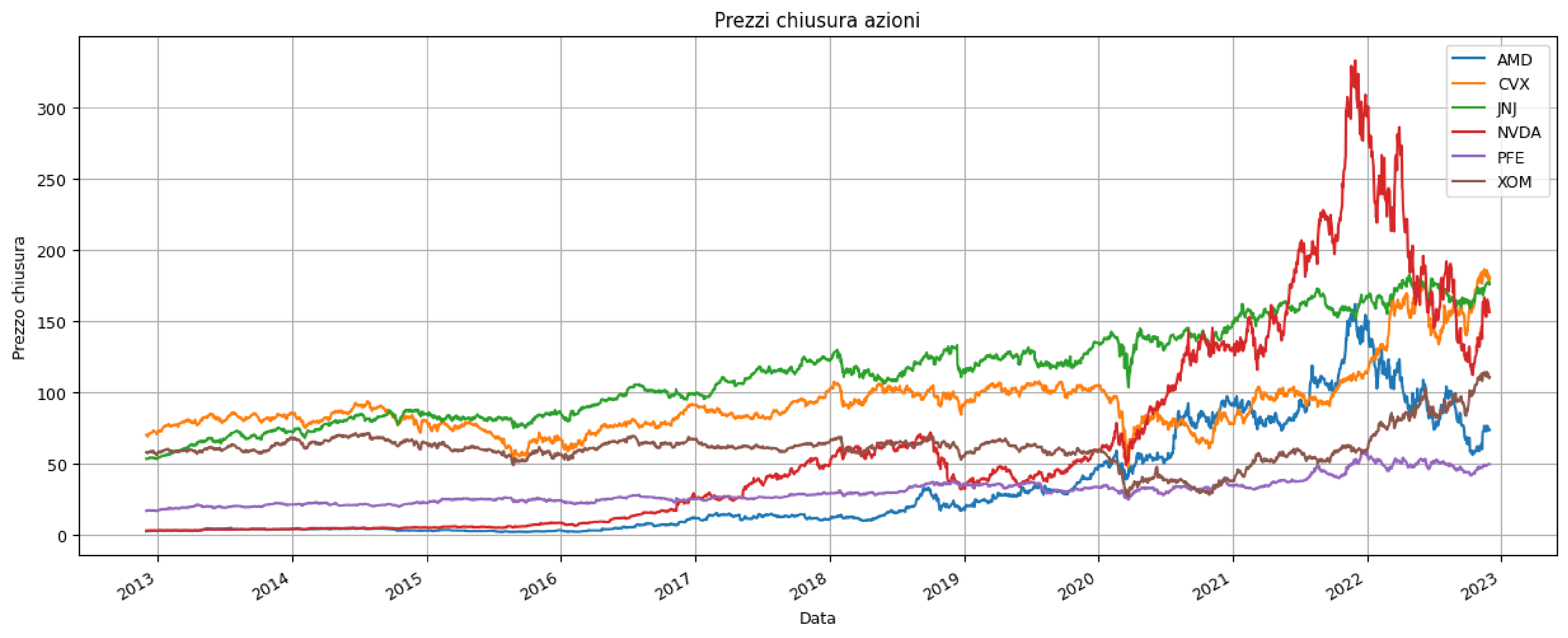
AZIONI ANALIZZATE

Quali sono state scelte?

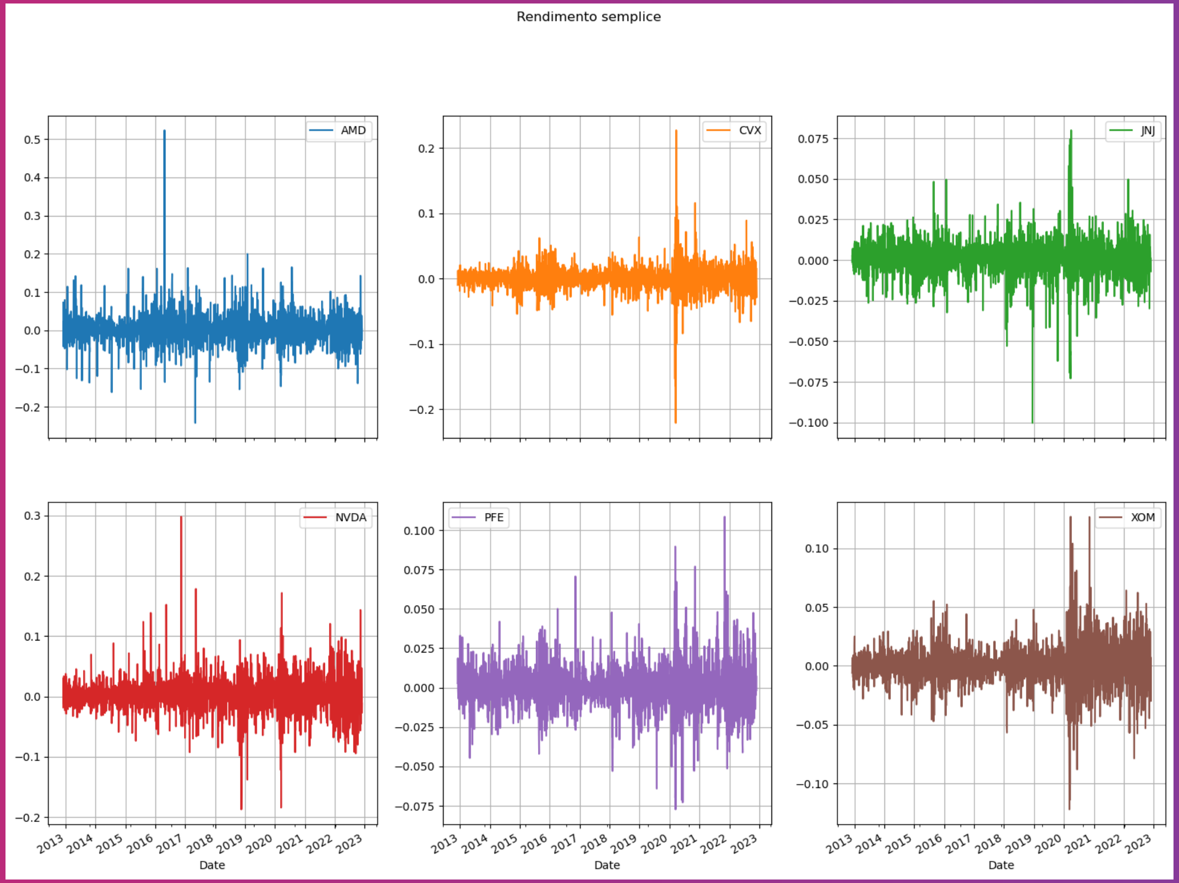
Aziende americane da 3 settori:

- Tecnologico
- Energetico
- Sistema sanitario

GRAFICO DEI PREZZI



GRAFICI DEI RENDIMENTI

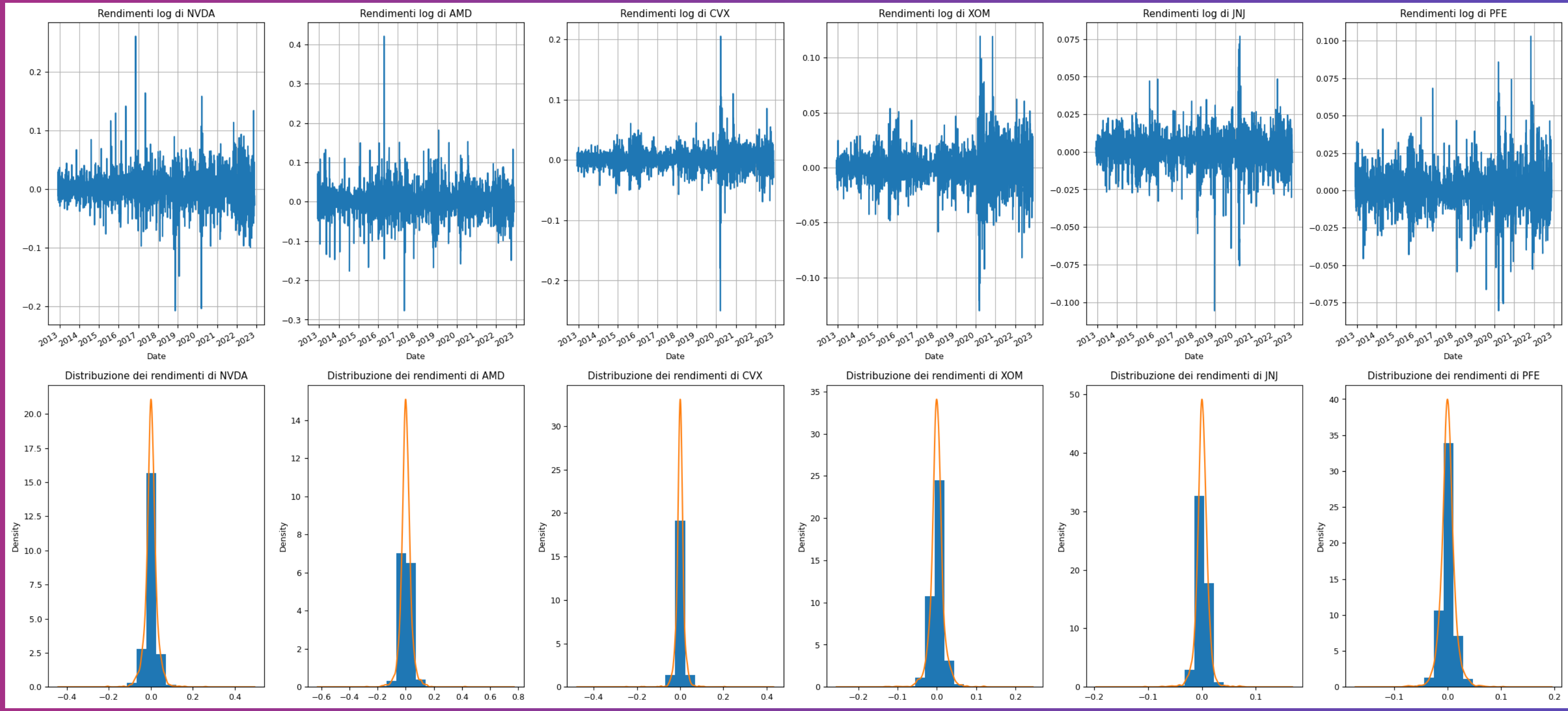



```
Rendimento cumulato:
AMD     33.359090
CVX      2.590146
JNJ      3.315367
NVDA    56.564685
PFE      2.982020
XOM      1.915434
dtype: float64

Rendimento composto annuo:

AMD     0.420108
CVX     0.099847
JNJ     0.127335
NVDA    0.497113
PFE     0.115452
XOM     0.067153
dtype: float64
```

GRAFICO DEI RENDIMENTI

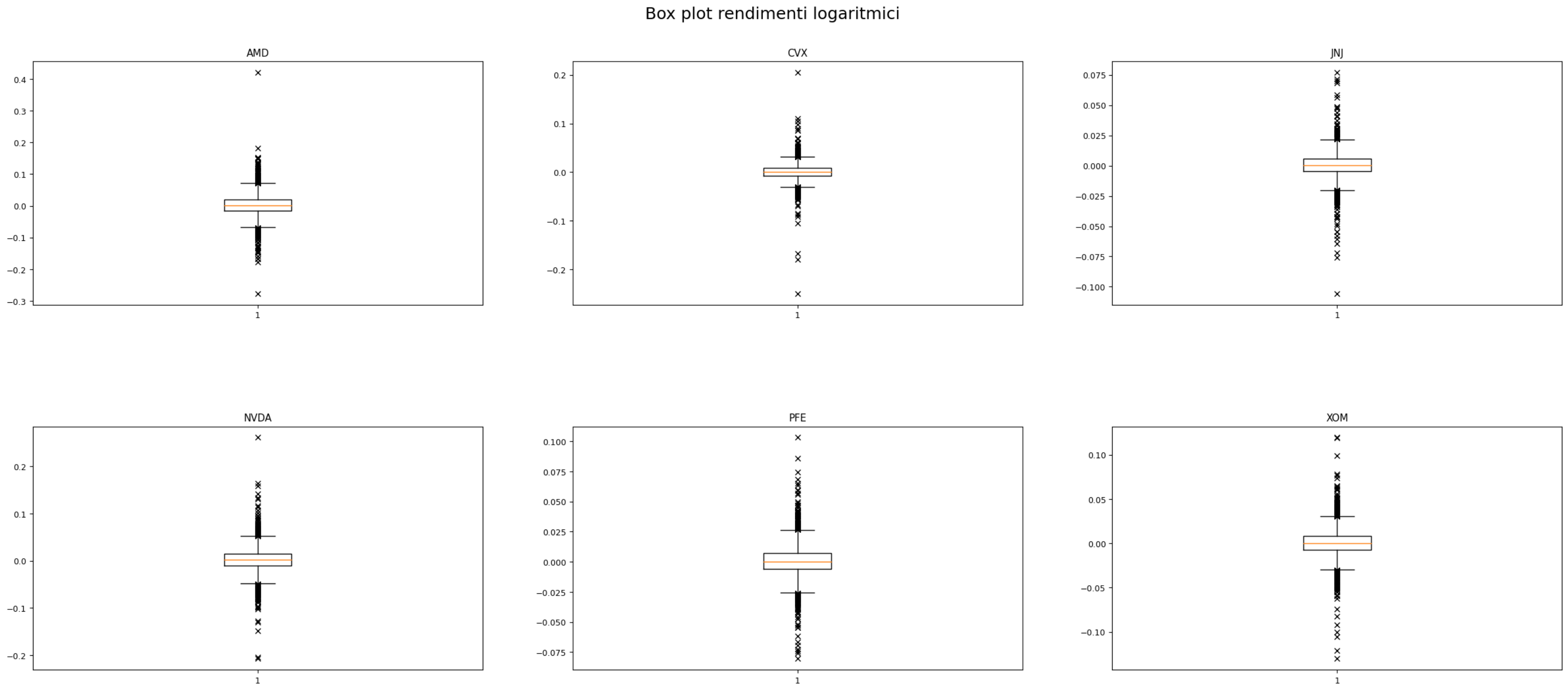
2023

Sia grafico dei rendimenti logaritmici sia istogramma della distribuzione dei rendimenti con la densità

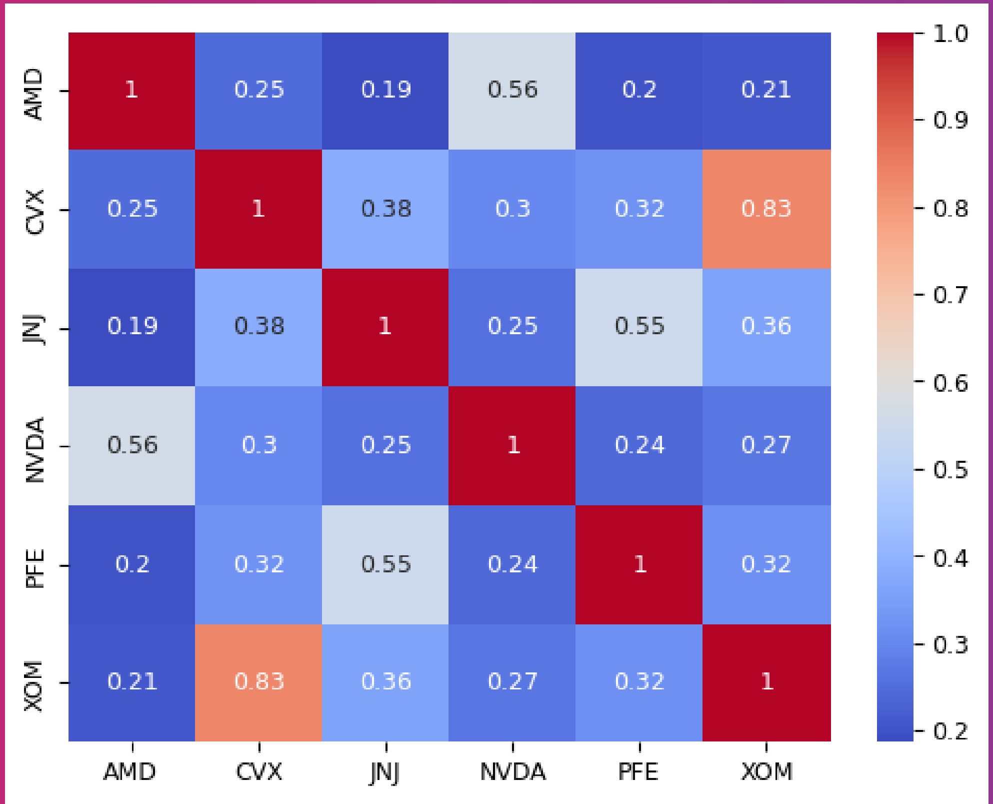


BOXPLOT RENDIMENTI

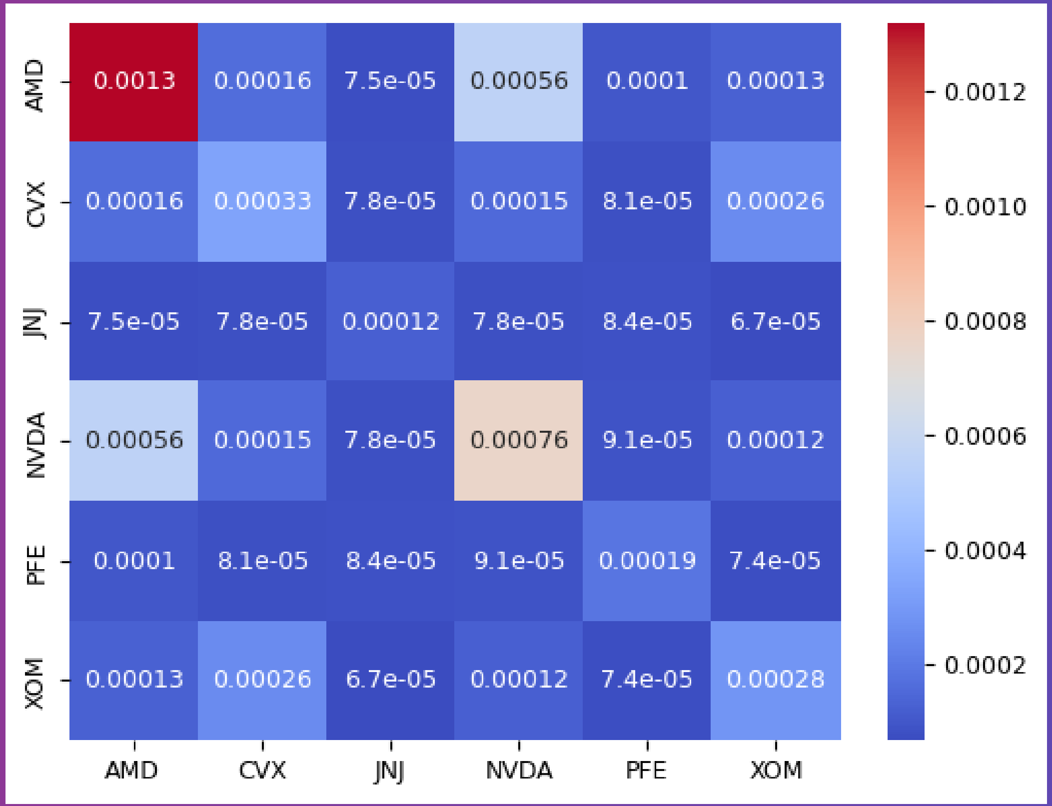
2023



CORRELAZIONE E VARIANZE

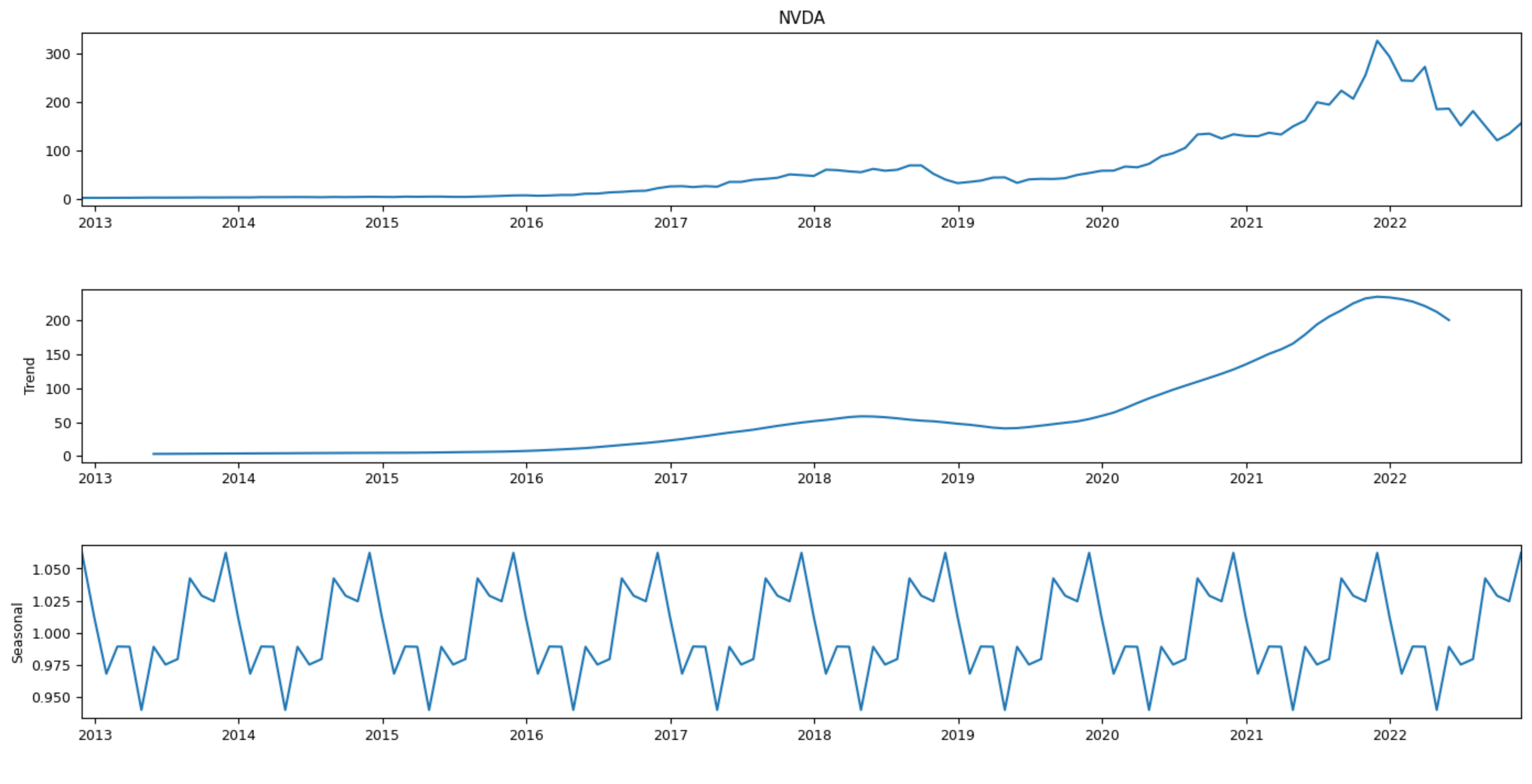


Matrice di correlazione

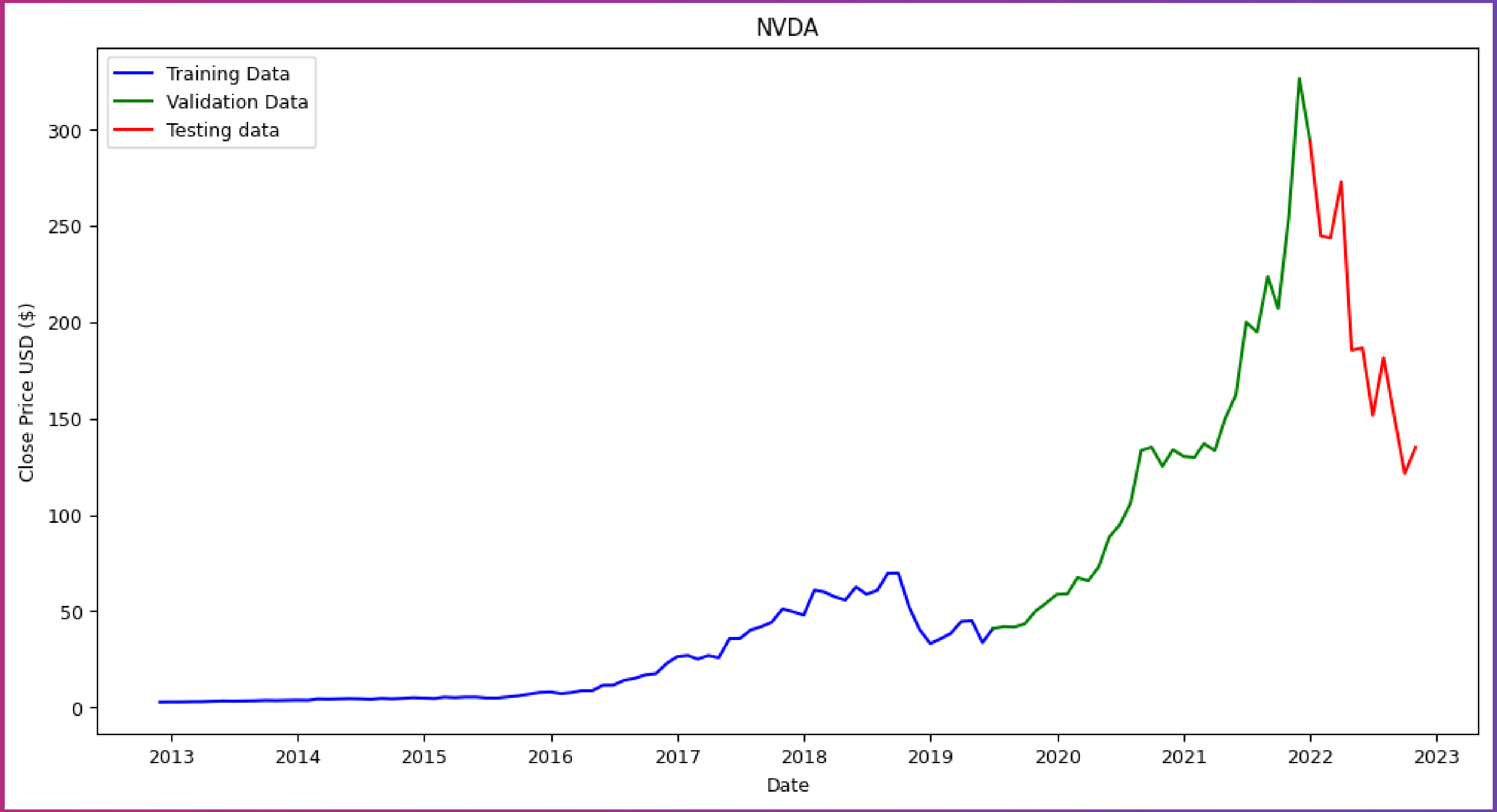


Matrice delle varianze

ANALISI STAGIONALITA'

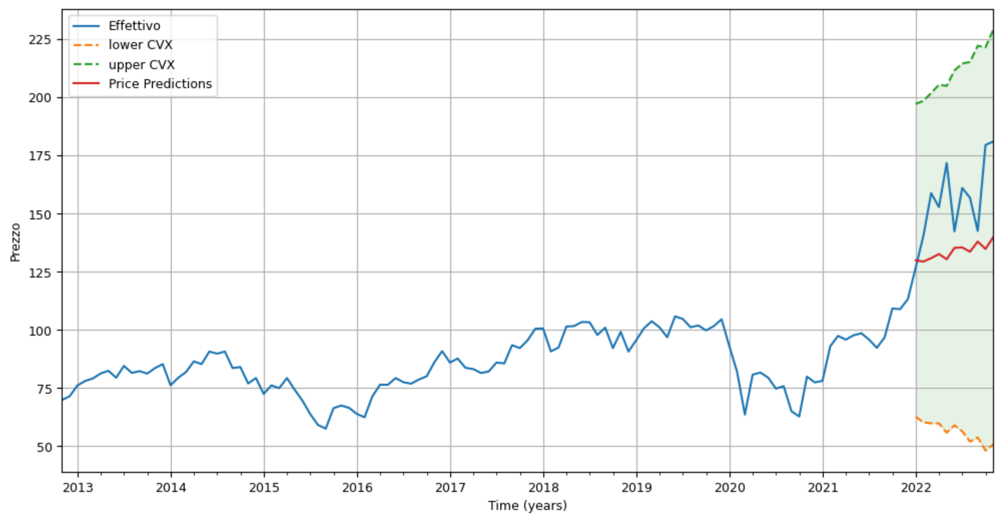


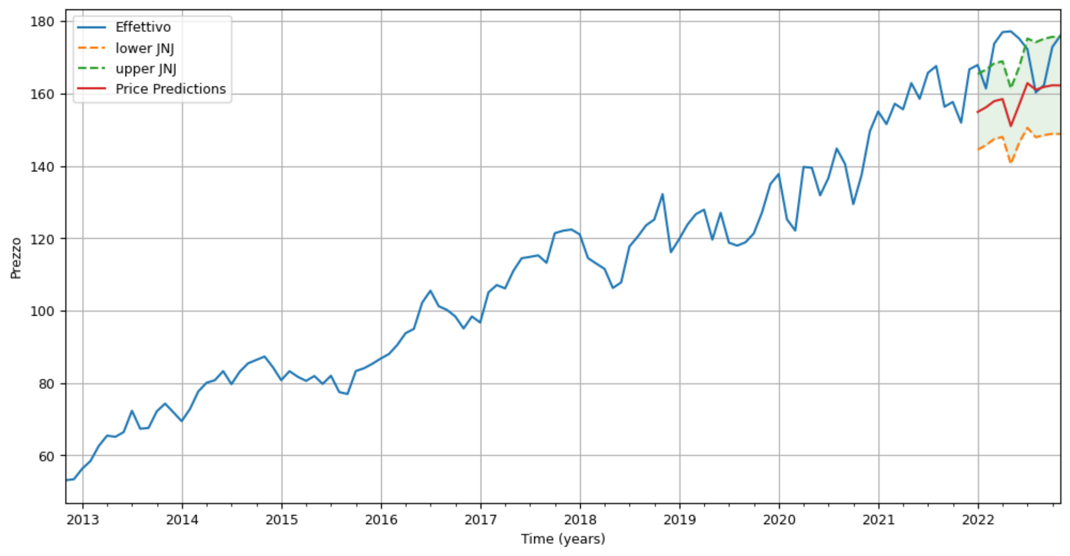
ANALISI PREVISIONE

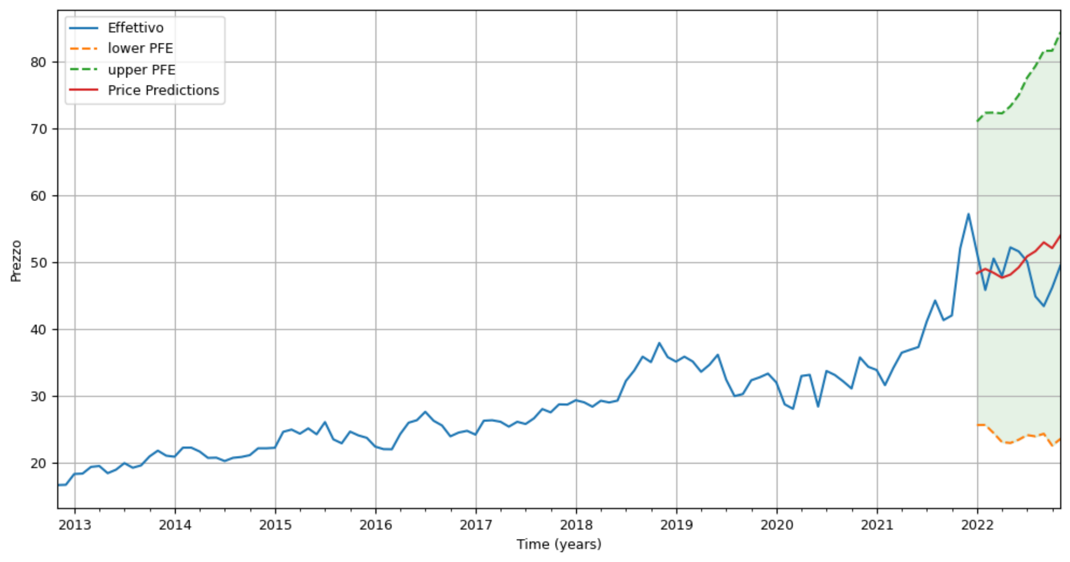


SARIMAX

Migliori previsioni

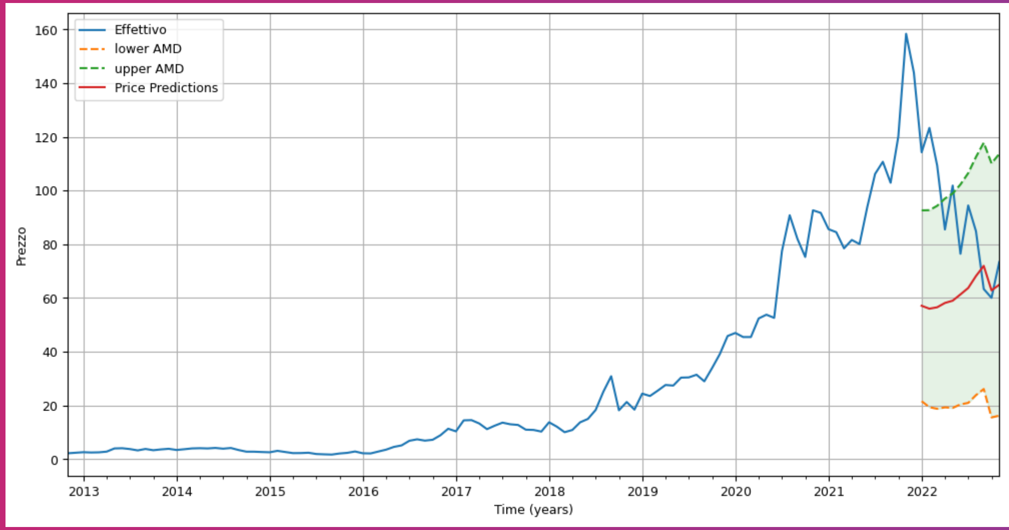


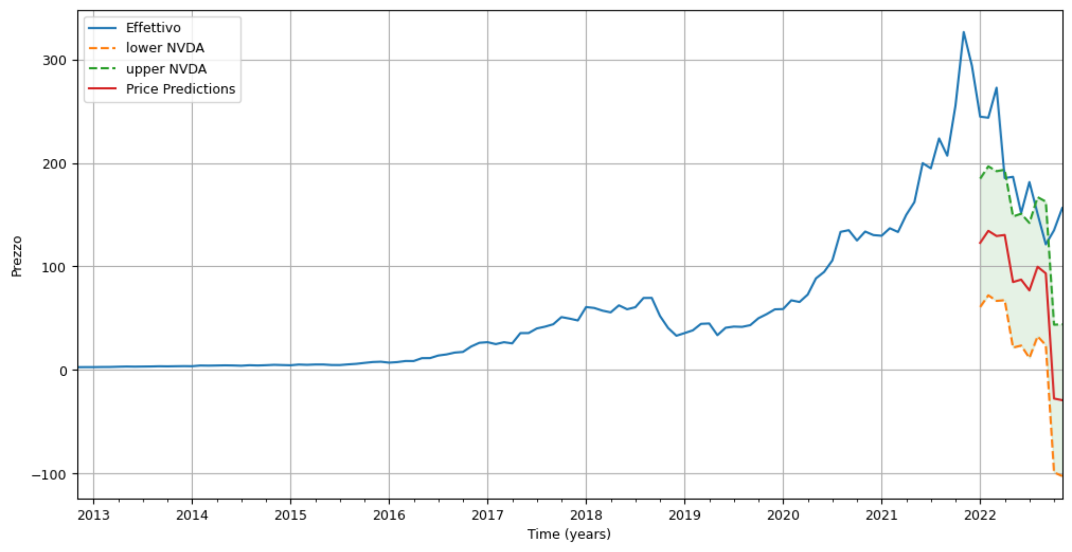


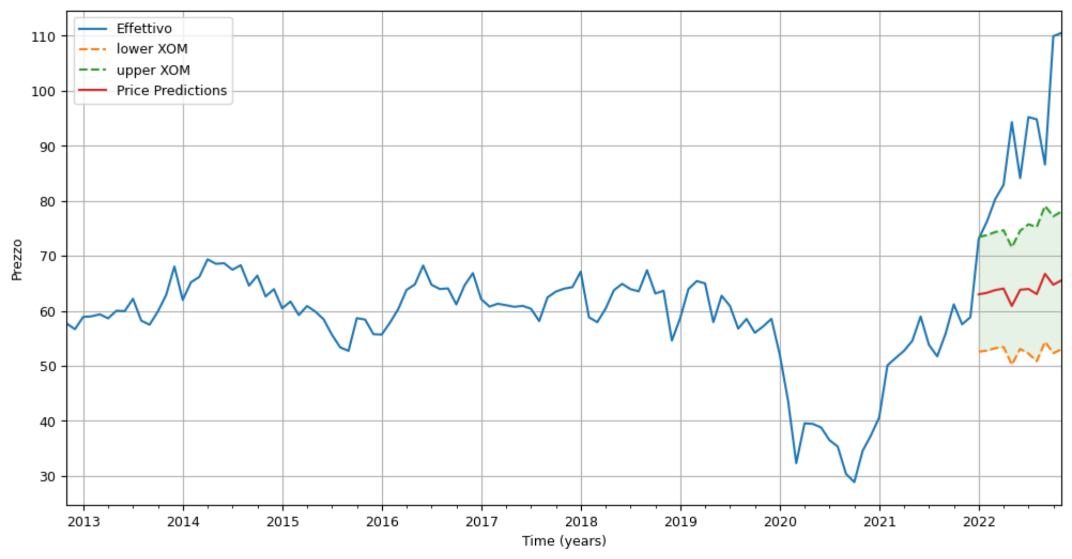


SARIMAX

Peggiori previsioni

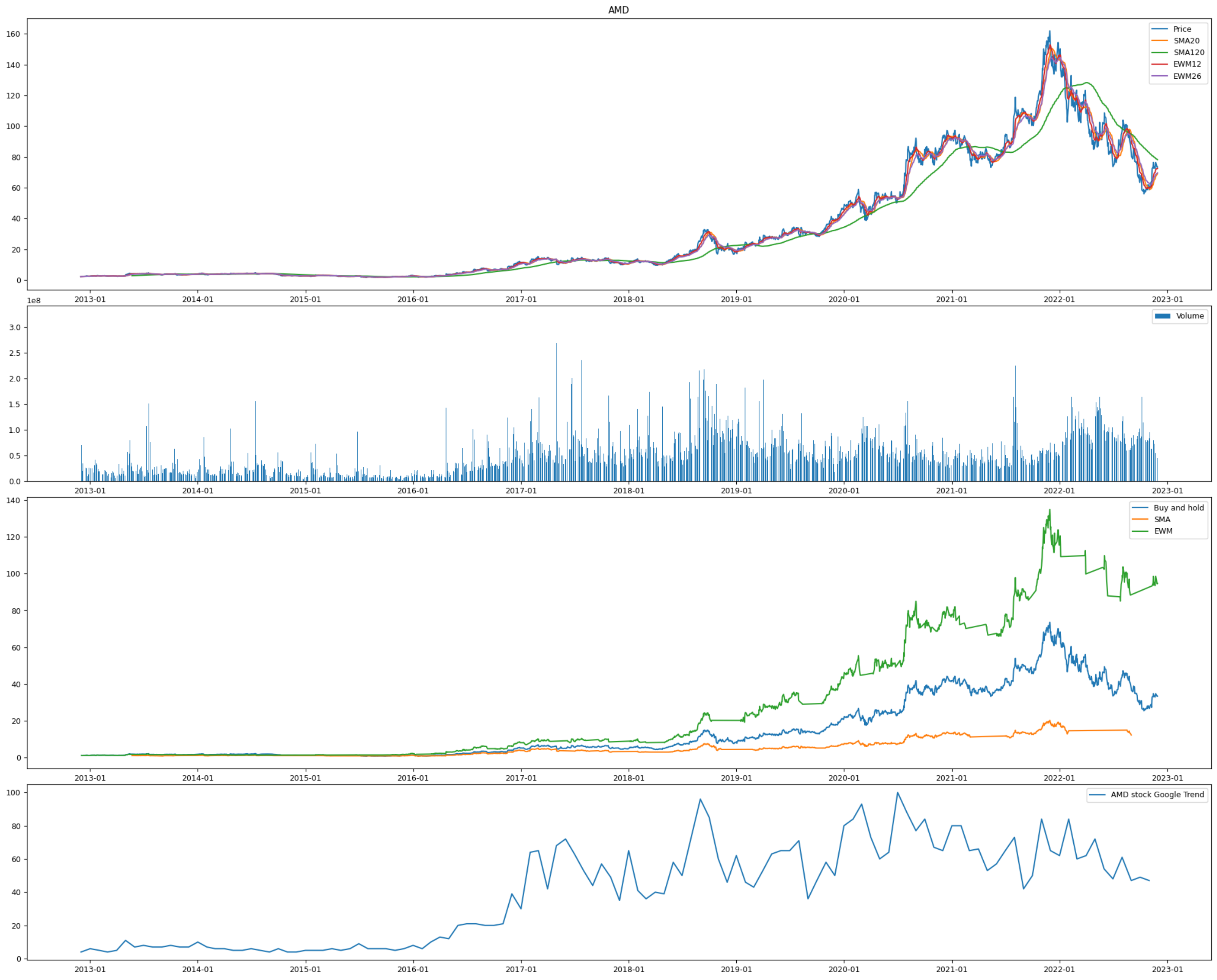






TRADING E BACKTESTING

Utilizzo di MACD



2023

CAPM e FAMA FRENCH

AMD	2.049380
CVX	1.186900
JNJ	0.614717
NVDA	1.642724
PFE	0.739949
XOM	1.089505
^GSPC	1.000000

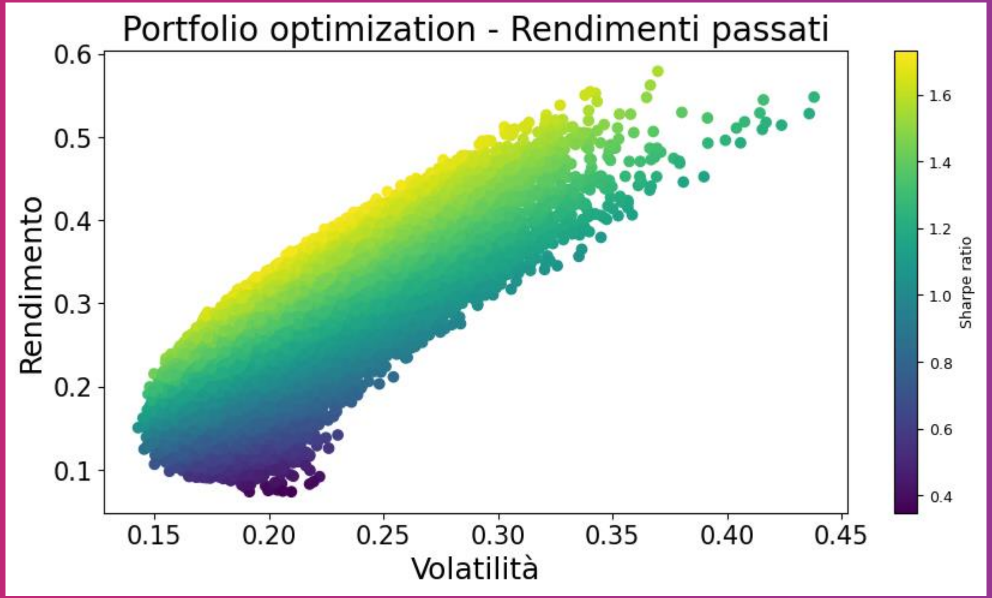
Beta

AMD	0.250752
CVX	0.145452
JNJ	0.075594
NVDA	0.201103
PFE	0.090884
XOM	0.133561
^GSPC	0.122633

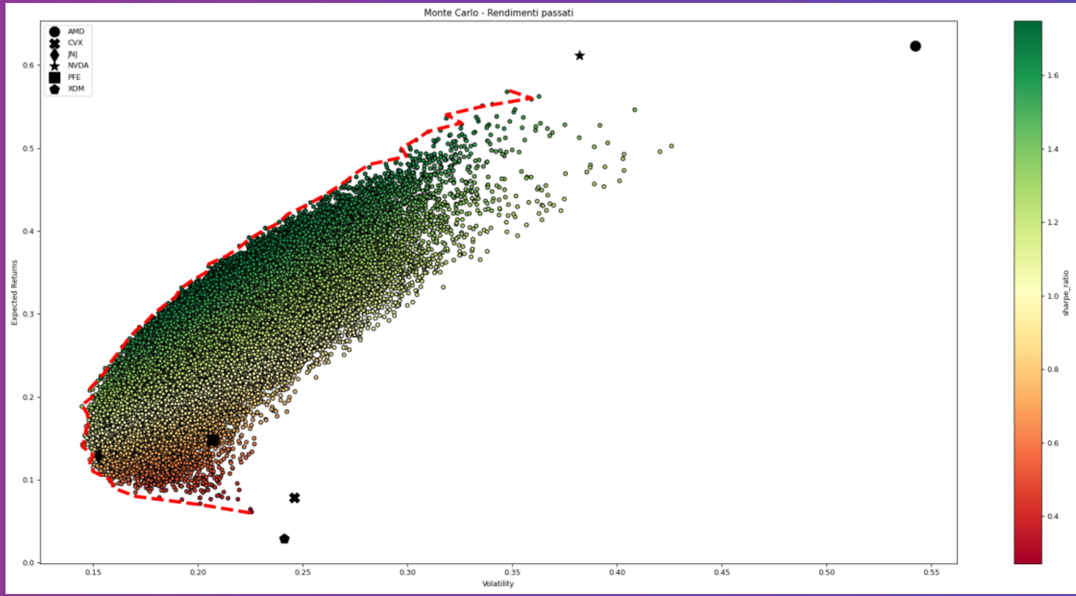
Rendimenti attesi

RENDIMENTI PASSATI

2023



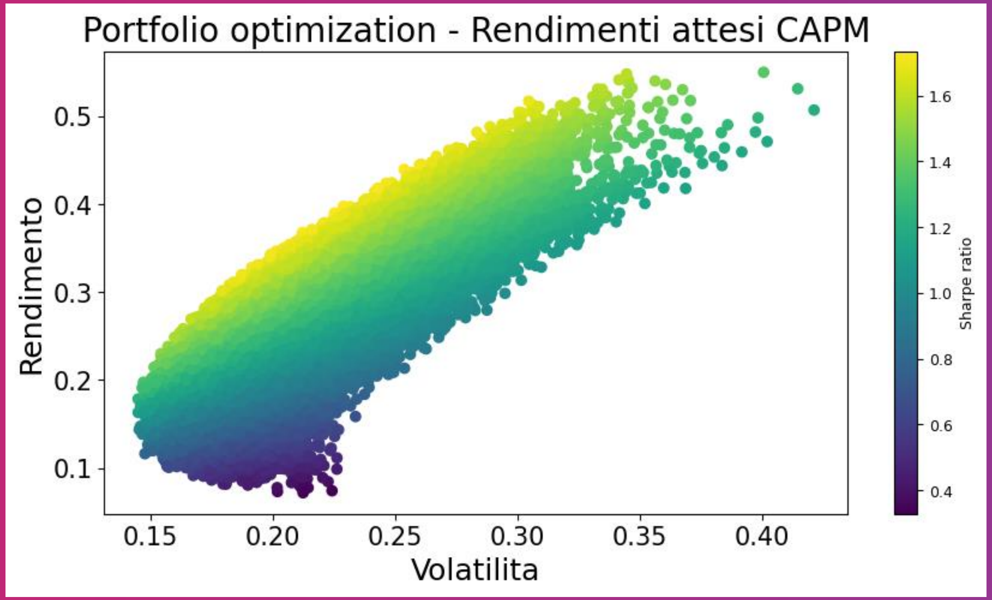
Metodo analitico



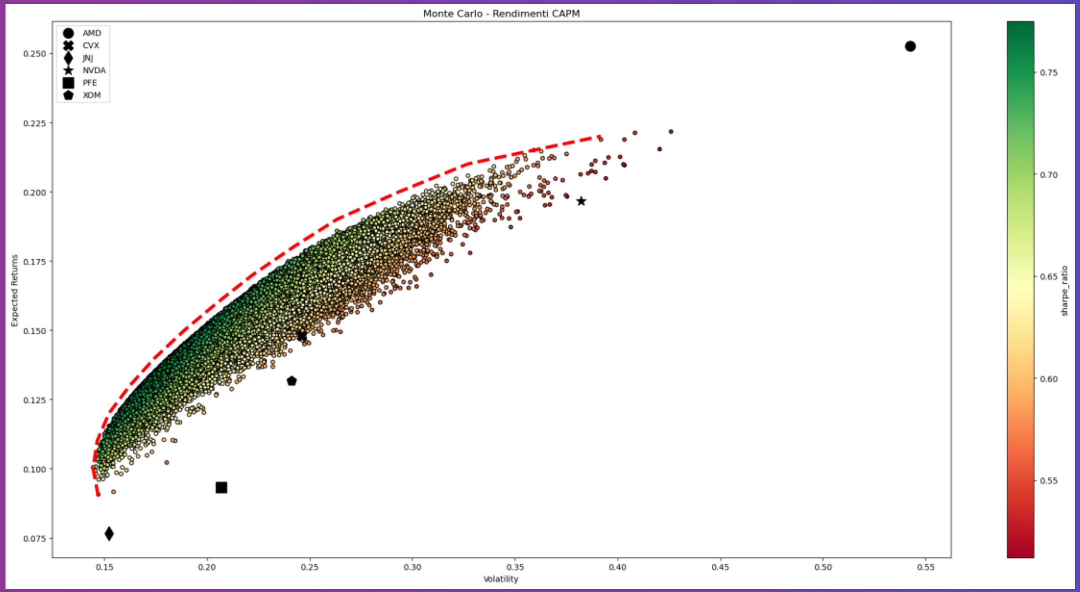
Metodo di simulazione
(Monte Carlo)

RENDIMENTI ATTESI (CAPM)

2023



Metodo analitico



Metodo di simulazione
(Monte Carlo)

CONFRONTO PORTAFOGLI

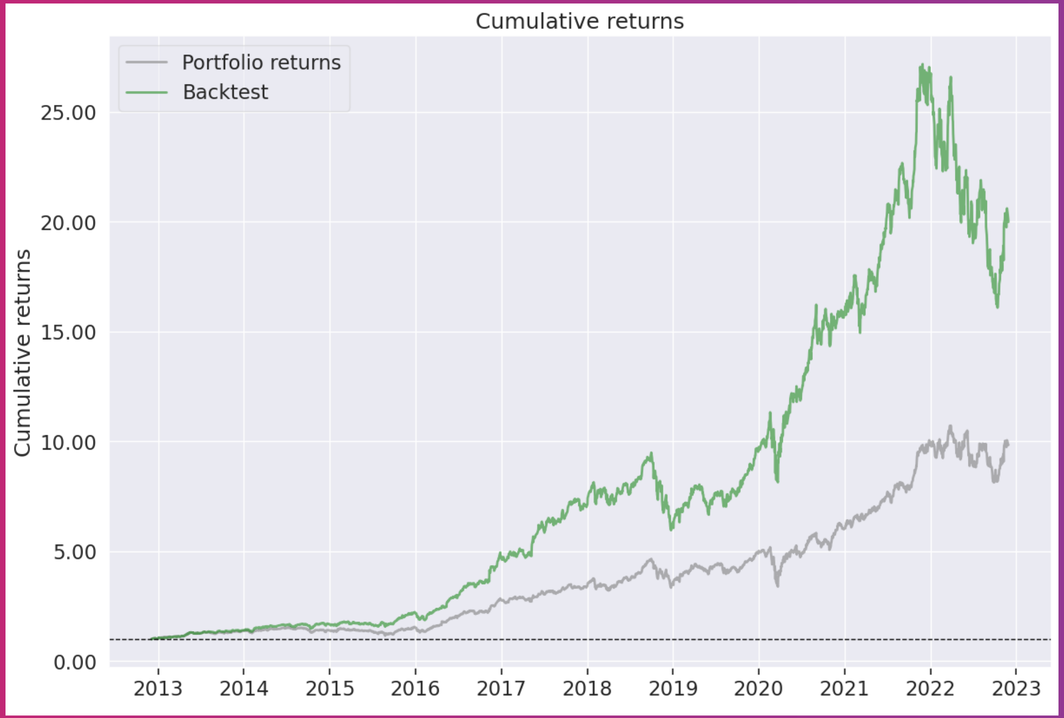
CAPM metodo analitico

```
Highest Sharpe ratio
Return                                0.359053
Risk                                  0.207281
Sharpe                                1.729589
Weights    [0.066, 0.009, 0.41, 0.411, 0.085, 0.019]
Name: 3463, dtype: object

Lowest risk
Return                               0.168438
Risk                                 0.143594
Sharpe                               1.169239
Weights    [0.003, 0.032, 0.632, 0.1, 0.124, 0.109]
Name: 24556, dtype: object
```

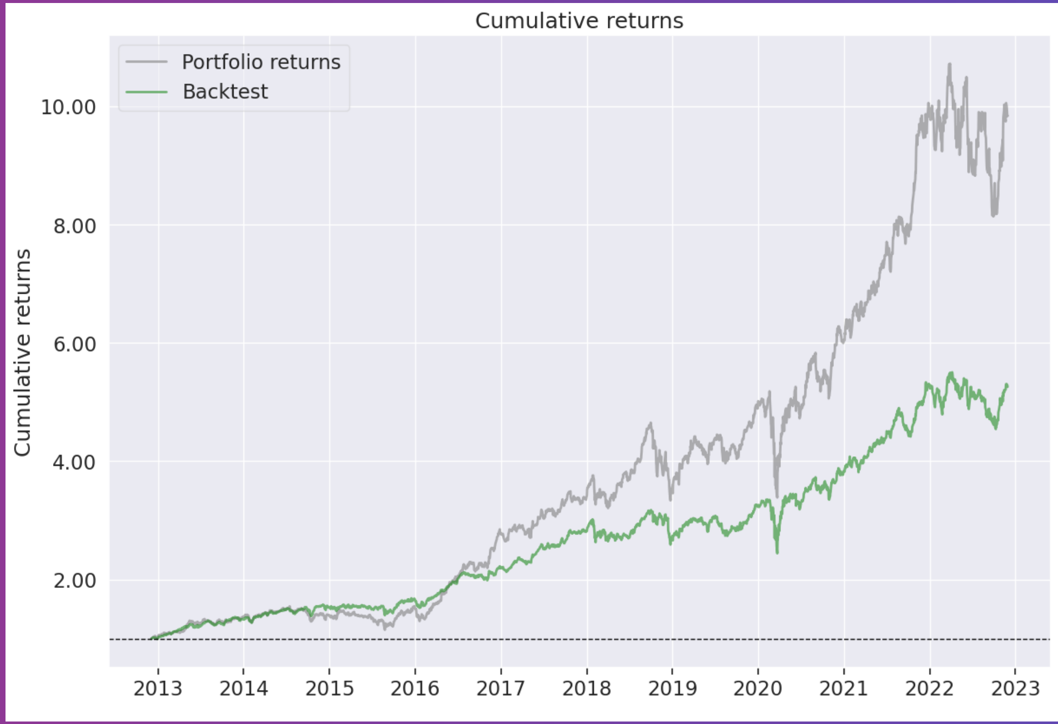
Rendimenti passati metodo analitico

```
Highest Sharpe ratio
Return                                    0.389424
Risk                                       0.22415
Sharpe                                    1.734914
Weights    [0.076, 0.006, 0.418, 0.466, 0.016, 0.017]
Name: 97711, dtype: object

Lowest risk
Return                                    0.15496
Risk                                     0.142966
Sharpe                                   1.080097
Weights    [0.007, 0.001, 0.611, 0.067, 0.183, 0.13]
Name: 22351, dtype: object
```

PRESTAZIONI



Miglior sharpe ratio



Minor volatilità

GRAZIE!

Quaggio Stefano