# Untitled

December 5, 2025

[2]:
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import ffn
%matplotlib inline
from dateutil.relativedelta import relativedelta
```

[3]:
```
prices = pd.read_csv("highvol.csv")
#takes the raw data and puts it in a data structure that the library accepts
#take out spaces
clean_col_names = []
for i in range(0,len(prices.columns)):
    clean_col_names.append(prices.columns[i].strip())

prices.columns = clean_col_names
date = prices.columns[0]
prices[date] = pd.to_datetime(prices[date])
prices.set_index(date, inplace = True)
#makes it so its oldest date is the first row
# prices = prices.iloc[::-1]

for i in prices:
    print(i)
    print("")
    perf = prices[i].calc_stats()
    perf.display()
    print("")
    perf.display_monthly_returns()
    print("")
    perf.plot()
```

```
statarb

Stats for statarb from 2022-10-01 00:00:00 - 2025-10-31 00:00:00
Annual risk-free rate considered: 0.00%
Summary:
Total Return      Sharpe  CAGR     Max Drawdown
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```

1653.60%  2.96  153.22%  -15.71%

Annualized Returns:

| mtd | 3m | 6m | ytd | 1y | 3y | 5y | 10y | incep. |
|---|---|---|---|---|---|---|---|---|
| 12.50% | 25.20% | 46.89% | 121.87% | 162.88% | 148.16% | - | - | 153.22% |

Periodic:

| | daily | monthly | yearly |
|---|---|---|---|
| sharpe | 2.96 | 3.66 | 4.49 |
| mean | 66.70% | 97.58% | 148.87% |
| vol | 22.53% | 26.63% | 33.17% |
| skew | 0.68 | 0.49 | 1.24 |
| kurt | 3.25 | 1.00 | - |
| best | 8.55% | 28.98% | 185.89% |
| worst | -4.45% | -8.83% | 121.87% |

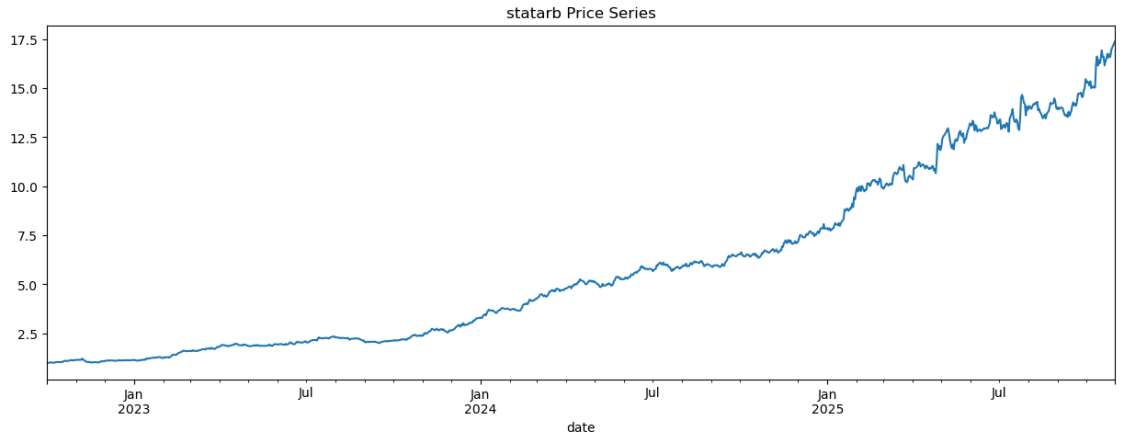
Drawdowns:

| max | avg | # days |
|---|---|---|
| -15.71% | -2.60% | 8.24 |

Misc:

| | |
|---|---|
| avg. up month | 9.30% |
| avg. down month | -4.77% |
| up year % | 100.00% |
| 12m up % | 100.00% |

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YTD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2022 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14.68 | -4.61 | 5.81 | 15.75 |
| 2023 | 8.05 | 28.98 | 13.32 | 4.06 | 2.88 | 7.68 | 12.78 | -8.83 | -0.86 | 12.82 | 10.75 | 23.29 | 185.89 |
| 2024 | 14.02 | 13.61 | 12.71 | 6.84 | 2.75 | 9.21 | 2.38 | 0.98 | 9.97 | 1.3 | 7.81 | 9.9 | 138.83 |
| 2025 | 23.77 | 2.46 | 4.83 | 13.61 | 11.48 | 0.05 | 5.2 | 0.3 | 10.96 | 12.5 | 0 | 0 | 121.87 |

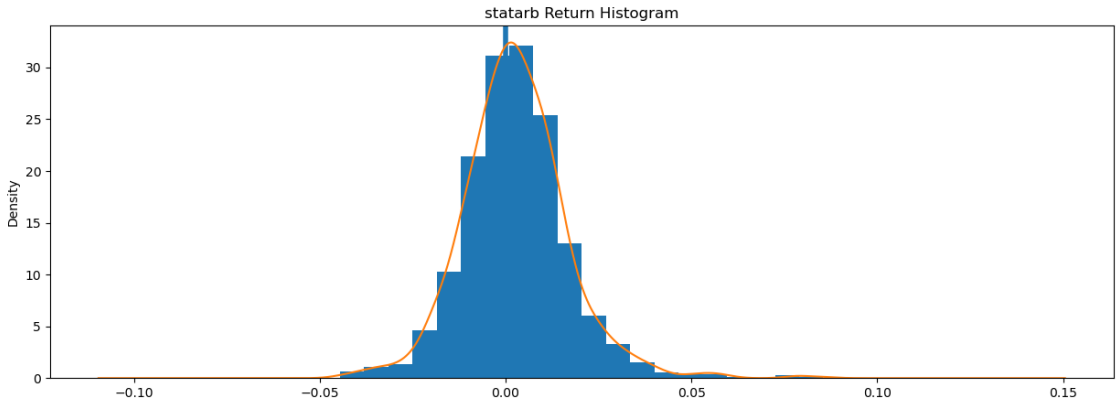



[4]:
```
perf.plot_histogram()
perf.stats
```

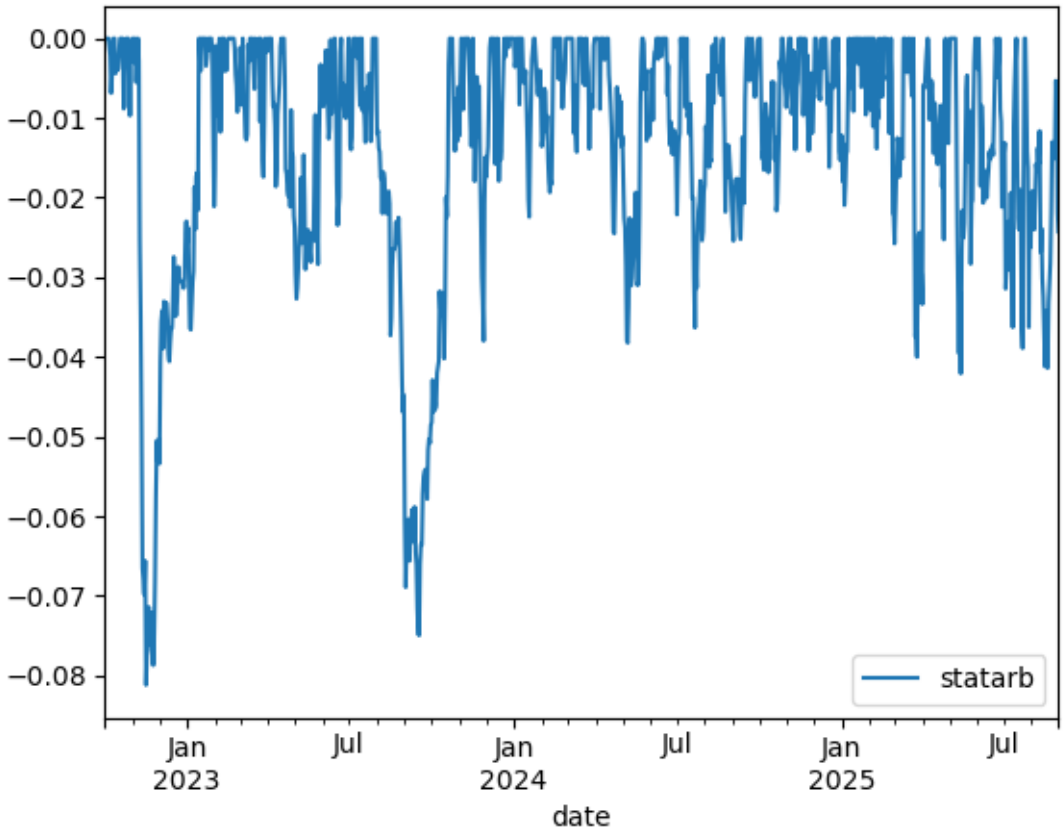
[4]:

| | |
|---|---|
| start | 2022-10-01 00:00:00 |
| end | 2025-10-31 00:00:00 |
| rf | 0.0 |
| total_return | 16.536004 |
| cagr | 1.532236 |
| max_drawdown | -0.157078 |
| calmar | 9.754637 |
| mtd | 0.124954 |
| three_month | 0.251984 |
| six_month | 0.468949 |
| ytd | 1.218689 |
| one_year | 1.628839 |
| three_year | 1.481563 |
| five_year | NaN |
| ten_year | NaN |
| incep | 1.532236 |
| daily_sharpe | 2.960063 |
| daily_sortino | 6.039871 |
| daily_mean | 0.666989 |
| daily_vol | 0.225329 |
| daily_skew | 0.680739 |
| daily_kurt | 3.251404 |
| best_day | 0.085491 |
| worst_day | -0.044526 |
| monthly_sharpe | 3.664517 |
| monthly_sortino | 17.164888 |
| monthly_mean | 0.975839 |
| monthly_vol | 0.266294 |

```
monthly_skew                0.488044
monthly_kurt                 0.99828
best_month                  0.289834
worst_month                -0.088315
yearly_sharpe               4.487807
yearly_sortino                   inf
yearly_mean                 1.488651
yearly_vol                   0.33171
yearly_skew                 1.236587
yearly_kurt                      NaN
best_year                   1.858944
worst_year                  1.218689
avg_drawdown                -0.02604
avg_drawdown_days           8.242991
avg_up_month                0.093046
avg_down_month             -0.047667
win_year_perc                    1.0
twelve_month_win_perc            1.0
dtype: object
```




[46]:
```
pd.set_option('display.max_rows', None)
stats = prices.calc_stats()
ax = stats.prices.to_drawdown_series().plot()
```


0.00
−0.01
−0.02
−0.03
−0.04
−0.05
−0.06
−0.07
−0.08
statarb
Jan
2023
Jul
Jan
2024
Jul
Jan
2025
Jul
date

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[ ]: