In [1]:
```
import matplotlib.pyplot as plt
import yfinance as yf
import numpy as np
import pandas as pd
```

In [5]:
```
# Donwload closing price data for Apple, Tesla, Google, MicroSoft

prices = yf.download(['AAPL','TSLA','GOOG','MSFT'], progress = False, period = '1y', interval = '1d')['Adj Close']
prices.head()
```

Out[5]:

Date	AAPL	GOOG	MSFT	TSLA
2022-06-17	130.779099	107.865501	245.279083	216.759995
2022-06-21	135.063492	112.014999	251.310791	237.036667
2022-06-22	134.546616	112.033997	250.706619	236.086670
2022-06-23	137.449265	112.684502	256.381775	235.070007
2022-06-24	140.819153	118.538002	265.137115	245.706665

In [10]:
```
# Fetch the holdings data
holdings = pd.read_csv('Position.csv')
holdings
```

Out[10]:

	AAPL	GOOG	MSFT	TSLA
0	100	0	0	0
1	0	-20	0	0
2	0	0	120	0
3	0	0	0	-50

In [11]:
```
# Calculate the dollar sensitivities ( holdings * spot price)
dollar_sensitivities = holdings*(prices.iloc[-1,:])
```

```
dollar_sensitivities
```

Out[11]:

	AAPL	GOOG	MSFT	TSLA
0	18491.999817	0.000000	0.000000	0.000000
1	0.000000	-2481.199951	0.000000	0.000000
2	0.000000	0.000000	41079.598389	0.000000
3	0.000000	0.000000	0.000000	-13027.000427

In [12]:
```
from riskcap import VaR, ES
```

In [13]:
```
model = VaR(dollar_sensitivities, prices, horizon = 1, methodology='historical', confidence=0.95 )
```

In [14]:
```
model.fit()
```

In [15]:
```
model.VaR
```

Out[15]:
```
1330.1528047389977
```

In [16]:
```
model = VaR(dollar_sensitivities, prices, horizon = 1, methodology='parametric', confidence=0.99 )
```

In [17]:
```
model.fit()
```

In [18]:
```
model.VaR
```

Out[18]:
```
2241.1724981140696
```

In [19]:
```
model = ES(dollar_sensitivities, prices, horizon = 1, methodology='historical', confidence=0.95 )
```

In [20]:
```
model.fit()
```

In [21]:
```
model.ES
```

Out[21]: 1885.1687097649108

In [22]:
```
model = ES(dollar_sensitivities, prices, horizon = 1, methodology='parametric', confidence=0.975 )
```

In [23]:
```
model.fit()
```

In [24]:
```
model.ES
```

Out[24]: 2252.2080134108555