etrade_performance_analysis

February 5, 2023

1 My Historical Performance

[ ]:

```
import pandas as pd
import numpy as np
import matplotlib as mpl
import matplotlib.pyplot as plt
import statistics
%matplotlib inline
plt.style.use('seaborn')
mpl.rcParams['font.family'] = 'serif'
```

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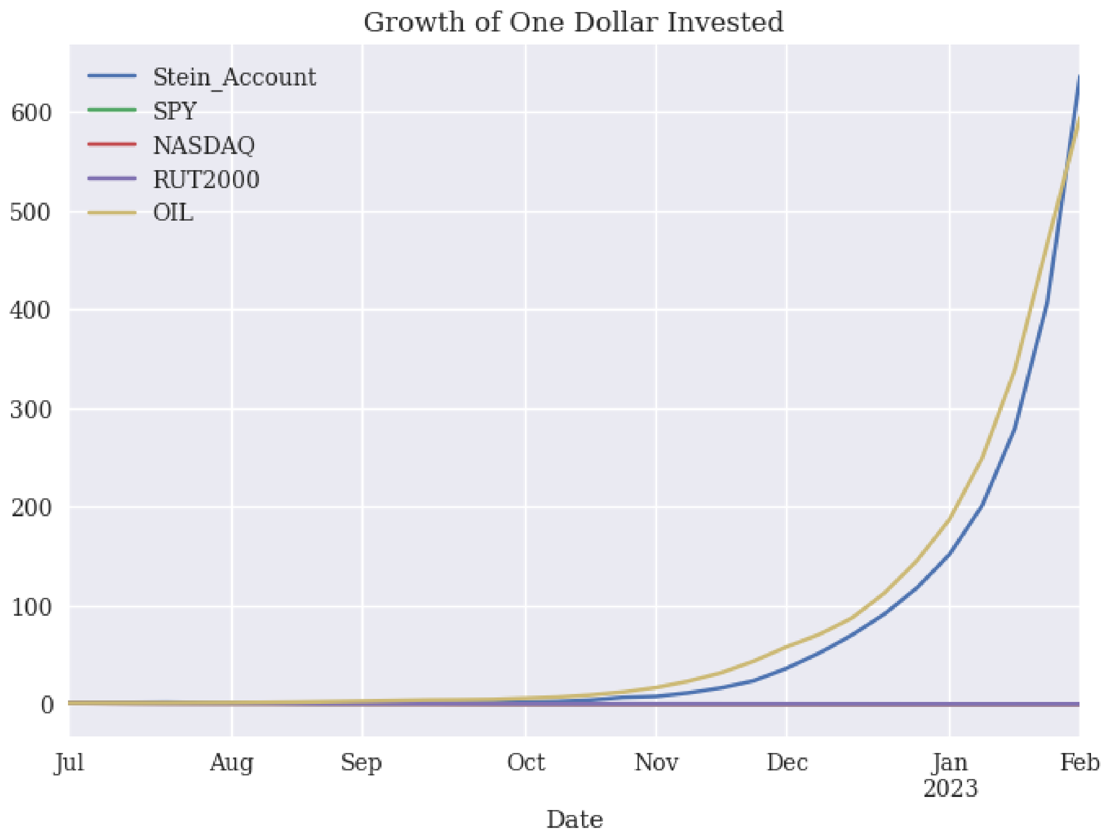
```
file_path = 'C:/Users/dcste/OneDrive/Economics_Research/Economics_Research/
  ↪etrade_performance.xlsx'
performance = pd.read_excel(file_path, parse_dates=True).set_index("Date")
```

[ ]:

```
((1+performance.loc['2022-07-01':,]).cumprod()).plot(title = 'Growth of One␣
  ↪Dollar Invested')
```

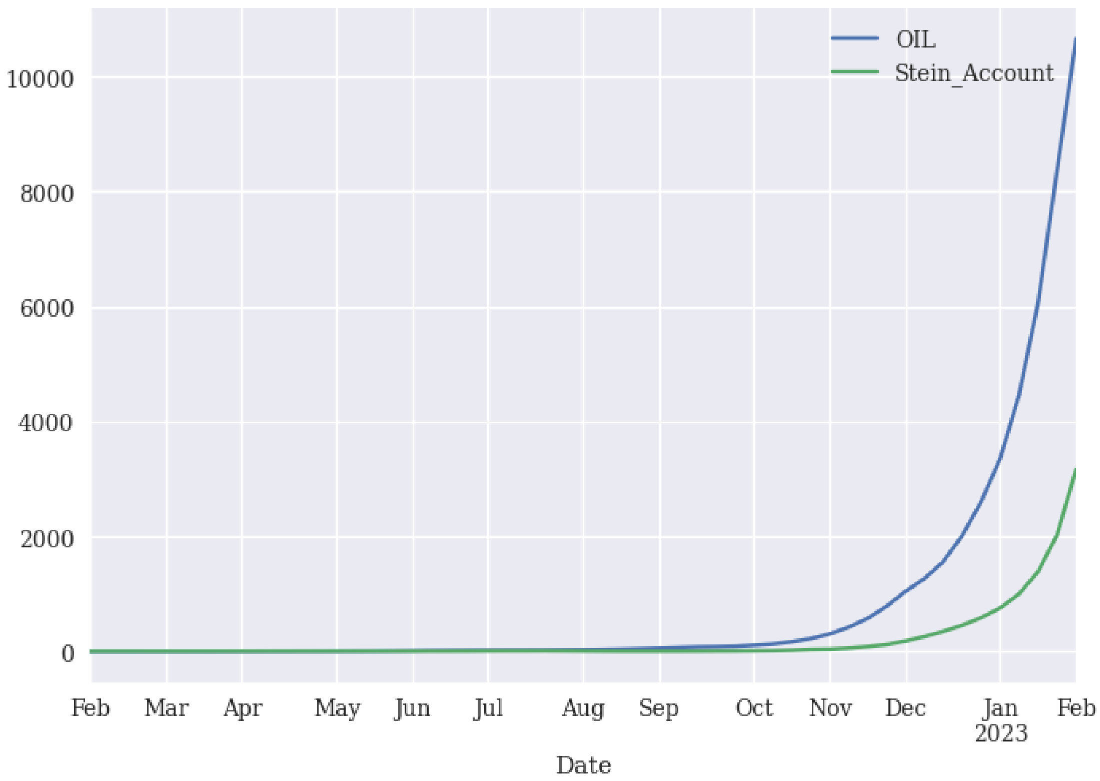
[ ]:

```
<AxesSubplot:title={'center':'Growth of One Dollar Invested'}, xlabel='Date'>
```



```
[ ]: (1+performance[['OIL','Stein_Account']]).cumprod().plot()
     plt.figure(figsize=(12,6))
```

```
[ ]: <Figure size 1200x600 with 0 Axes>
```



```
<Figure size 1200x600 with 0 Axes>
```

Slice the data frame starting June 17,2022 - That is when you started really trading

```
[ ]: df_performance = performance.loc['2022-06-17':]
```

```
[ ]: df_performance.describe()
```

```
[ ]:        Stein_Account        SPY     NASDAQ    RUT2000        OIL
     count      34.000000  34.000000  34.000000  34.000000  34.000000
     mean        0.249618  -0.114888  -0.175244  -0.076788   0.217615
     std         0.259403   0.038901   0.050931   0.046519   0.113838
     min        -0.318900  -0.191500  -0.250500  -0.154300   0.014100
     25%         0.105400  -0.133400  -0.214700  -0.105450   0.110125
     50%         0.298850  -0.115950  -0.181250  -0.083900   0.220150
     75%         0.441625  -0.086175  -0.155175  -0.042600   0.317775
     max         0.665000  -0.034200  -0.052500   0.024400   0.388600
```

```
[ ]: def performance(df, annualization = 52):
         perf_df = pd.DataFrame(data = None, columns = ['Mean',␣
      ↪'Sigma','Sharpe','Kurtosis','Var(5%)'], index = df.columns)
         for i in df.columns:
             perf_df.loc[i,'Mean'] = df[i].mean()*annualization
```

```
        perf_df.loc[i,'Sigma'] = df[i].std()*np.sqrt(annualization)
        perf_df.loc[i,'Sharpe'] = df[i].mean()*annualization/(df[i].std()*np.
 ↪sqrt(annualization))
        perf_df.loc[i,'Kurtosis'] = df[i].kurtosis()
        perf_df.loc[i,'Var(5%)'] = (df[i].std()*np.sqrt(annualization))*-1.65
    return perf_df.style.format('{:,.2%}')
```

[ ]:
```
performance(df_performance)
```

[ ]:
```
<pandas.io.formats.style.Styler at 0x1f7631ec100>
```

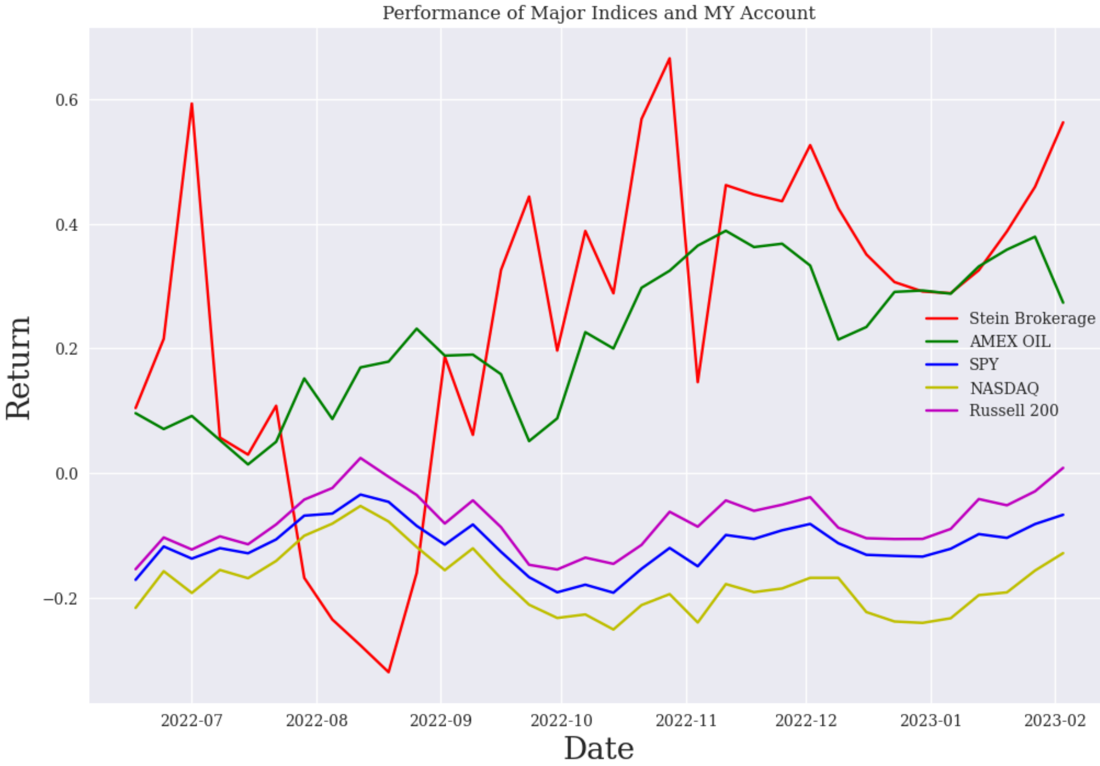
- Annualized I am getting almost a 1300% return with a standard deviation of 187% which is absolutely insane after 6 months of trading because your risk is just **too high.**

[ ]:
```
df_performance.columns
```

[ ]:
```
Index(['Stein_Account', 'SPY', 'NASDAQ', 'RUT2000', 'OIL'], dtype='object')
```

[ ]:
```
plt.figure(figsize = (12,8))
plt.plot(df_performance['Stein_Account'], c = 'r', label = 'Stein Brokerage')
plt.plot(df_performance['OIL'], c = 'g', label = 'AMEX OIL')
plt.plot(df_performance['SPY'], c = 'b', label = 'SPY')
plt.plot(df_performance['NASDAQ'], c = 'y', label = 'NASDAQ')
plt.plot(df_performance['RUT2000'], c = 'm', label = 'Russell 200')
plt.legend(loc = 0)
plt.title('Performance of Major Indices and MY Account')
plt.xlabel('Date', size = 20)
plt.ylabel('Return',size =20 )
```

[ ]:
```
Text(0, 0.5, 'Return')
```


Performance of Major Indices and MY Account
Return
Date
0.6
0.4
0.2
0.0
−0.2
2022-07
2022-08
2022-09
2022-10
2022-11
2022-12
2023-01
2023-02
Stein Brokerage
AMEX OIL
SPY
NASDAQ
Russell 200