Momentum Strategy Presentation

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JAMS
INVESTMENT

Agenda

Strategy Motivation (Potential)

Normally, the returns of stocks obeys the negatively skewed distribution

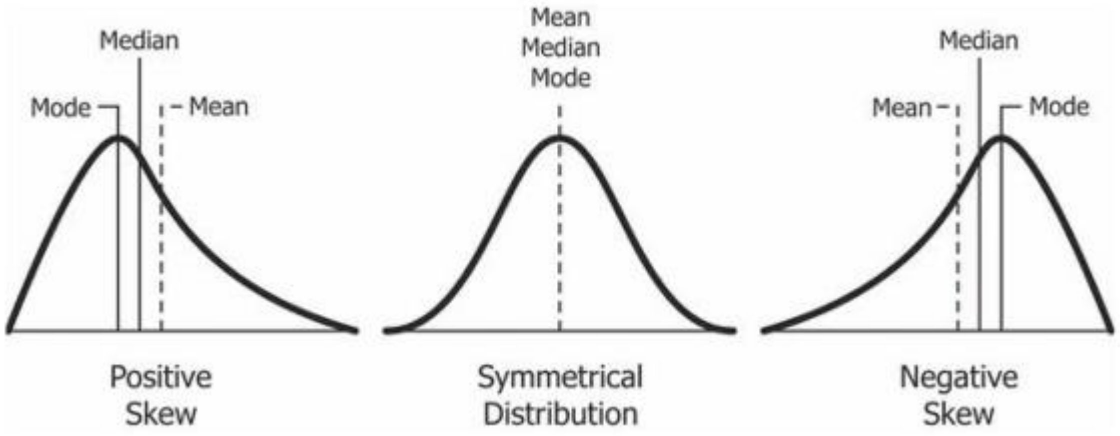
Core idea of stock selection : potential + stablility

M1 = Price ratio(yesterday v.s 6 days ago)

M2 = Price ratio(yesterday v.s 15 days ago)

M3 = Price ratio(yesterday v.s 30 days ago)

P = zscore(M1*M2*M3)



Intuition : small M1*M2*M3 means that the stock remains potential

Strategy Motivation (Stability)

S = zscore (**std (prices of past 6 months)**)

Intuition behind the factor S:

Low standard variation means that in the past 6 months,

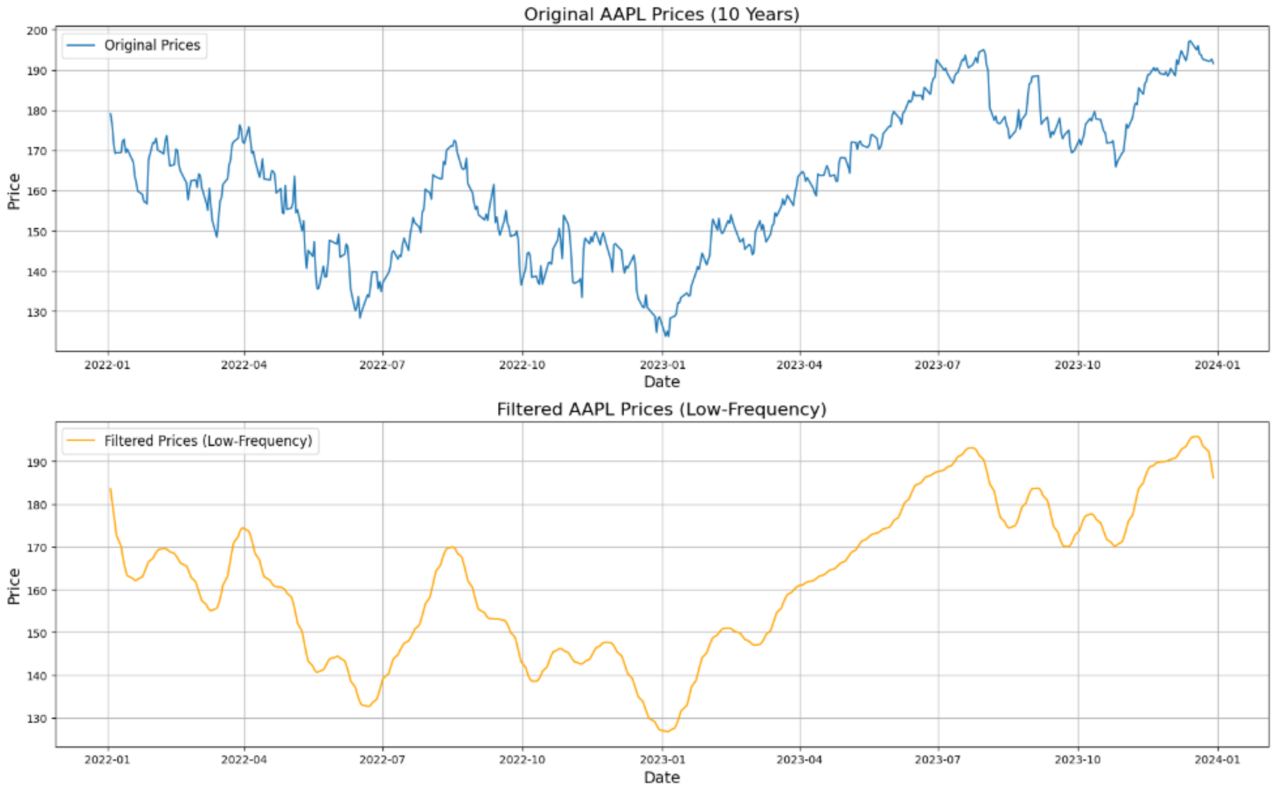
the prices of stocks have lower fluctuation

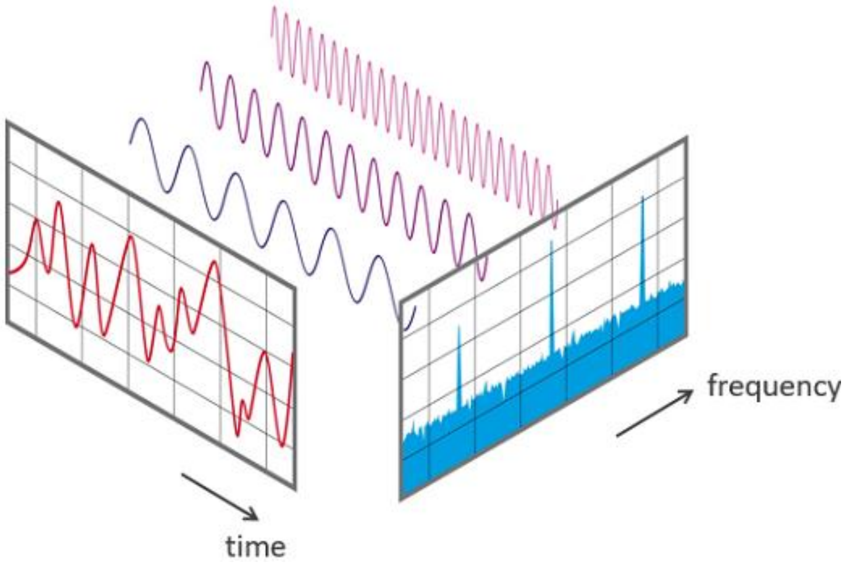
We select the top 10 stocks with the smallest P + M as stocks to trade from S&P 500 component stocks

Data Preprocessing

To remove noises in stock market, preprocessing is needed.

At the first day of each trading turns, Fast Fourier Transform is applied to stock prices over past 10 years in order to remove market noises (over-reacting).



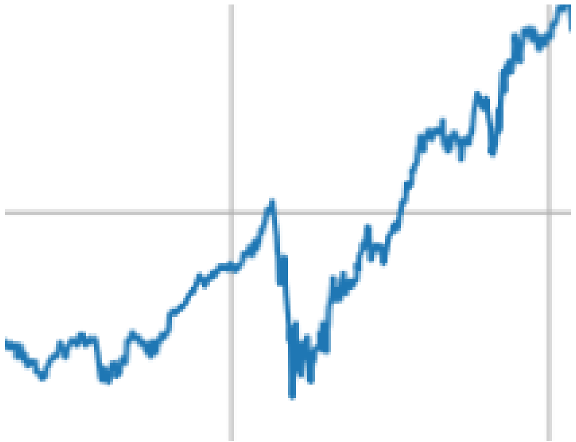


Optimization (Stop loss)

Risk management is crucial.

If a single stock loses more than 5%, short the stock the next day,

and simultaneously reduce the loss tolerance to 2%.



Result

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Momentum Train
Sharpe Ratio: 1.22
Maximum Drawdown: -27.55%
Annualized Return: 28.03%
Cumulative Return: 463.20%
Sortino Ratio: 0.0735

S&P 500  Train
Sharpe Ratio: 0.48
Maximum Drawdown: -33.92%
Annualized Return: 12.75%
Cumulative Return: 131.57%
Sortino Ratio: 0.0283

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Momentum Test
Sharpe Ratio: 1.38
Maximum Drawdown: -20.31%
Annualized Return: 36.29%
Cumulative Return: 149.79%
Sortino Ratio: 0.0934

S&P 500  Test
Sharpe Ratio: 0.19
Maximum Drawdown: -25.43%
Annualized Return: 7.08%
Cumulative Return: 22.42%
Sortino Ratio: 0.0120

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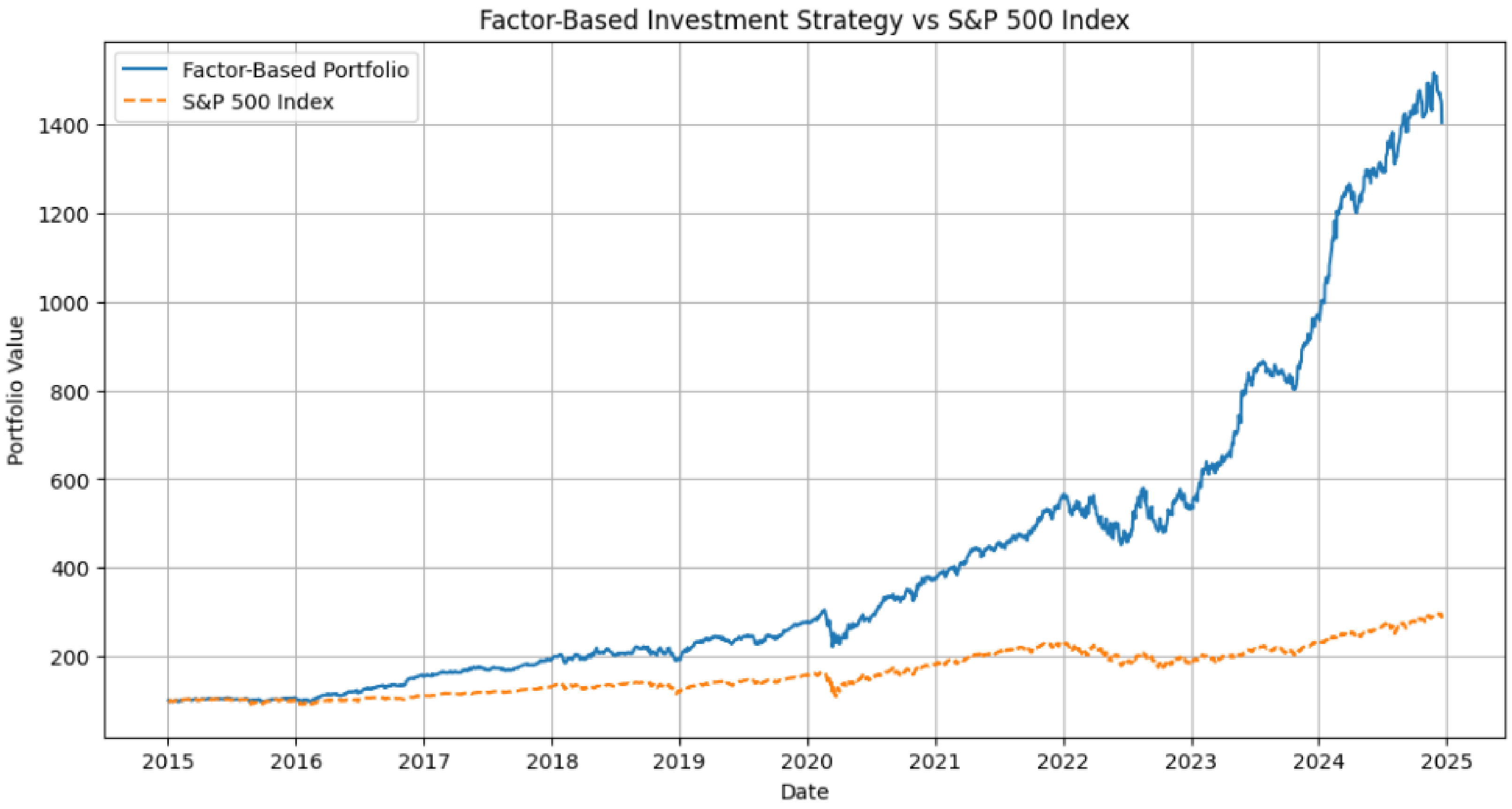

Improvement

The essence of a momentum strategy is to amplify the market's return. Therefore, when the market is trending upwards, significant profits can be made, but conversely, during a downturn, it can face immense pressure. Additionally, in times of market stagnation or volatility, there can be substantial losses.