



Stock Analysis with EMA20 Crossover

Analysis of crossing EMA 20 downward with respect to Trend, Sector, and Trading Volume



Disclaimer

This analysis represents only my opinion and is based on data available at the time of creation. All investments come with risks. Readers are encouraged to consult with a qualified financial advisor before making investment decisions. Past performance doesn't predict future results. Please seek professional advice before making investment decisions.



Objective and Summary

Objective

To figure what to pay attention when stocks cross downwards through the moving average of 20 days.

Summary

Recovery: Most stocks (>80%) are likely to revert to their previous levels, typically within 20 days.

Trends: Uptrends slightly favor stock recovery, though in unrecovered scenarios, downtrends lead to further losses.

Trading Volume: Low trading volumes result in slightly higher recovery but can also lead to greater losses if recovery fails.

Drawdown Implications: A drawdown greater than 20% indicates increased recovery time or potential non-recovery.



Data composition

Data sources: Yahoo Finance

Period: 3 years from 1st Aug 2020 to 31st July 2023

No. of stock for each sector

Commercial Services	22	Health Technology	92
Communications	3	Industrial Services	12
Consumer Durables	14	Miscellaneous	3
Consumer Non-Durables	13	Non-Energy Minerals	9
Consumer Services	20	Process Industries	16
Distribution Services	7	Producer Manufacturing	27
Electronic Technology	32	Retail Trade	16
Energy Minerals	10	Technology Services	51
Finance	87	Transportation	12
Health Services	9	Utilities	10



Assumptions

Day to Breakeven: The duration required to return to the closing price of the day preceding the crossover.

Maximum Drawdown: Represents the lowest price during the recovery period compared to the closing price on the day it crossed below the EMA20.

Carrying loss: The loss when the stocks hold do not recover on 31st July 2023, comparing closing price on the day to the closing price on 31st July 2023

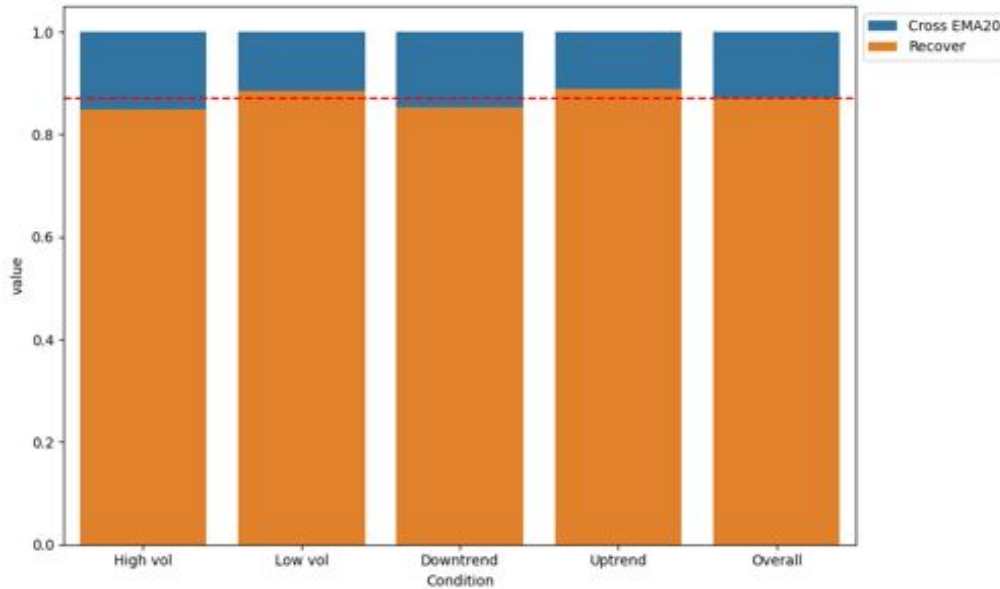
Trend: An EMA20 above the EMA200 is defined as an uptrend.

Trading Volume: Trading volume greater than the MA20 is defined as high trading volume.

The affect of dividends and stock-splits was neglected.

Overall Picture (Recovery Rate)

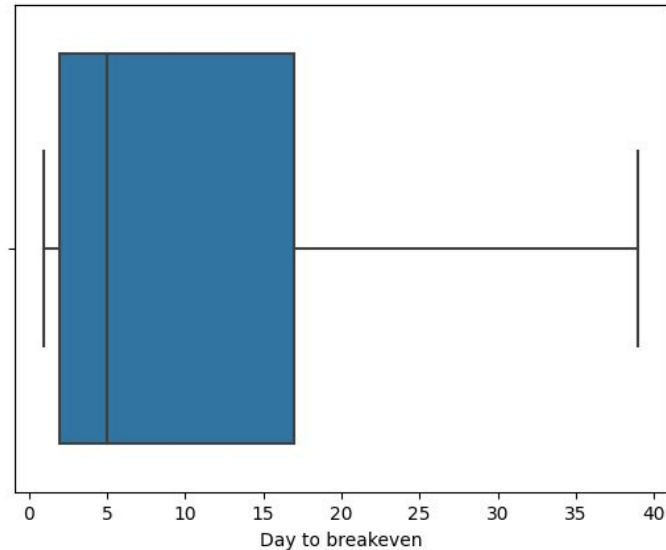
Recovery rate after crossing down EMA20



- Chance of stocks returning to previous levels: >85%
- Slightly higher recovery rate in uptrend or low trading volume

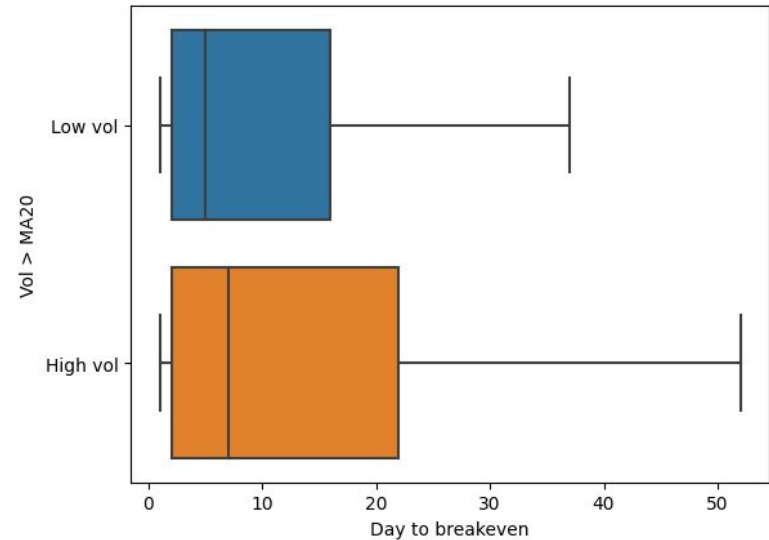
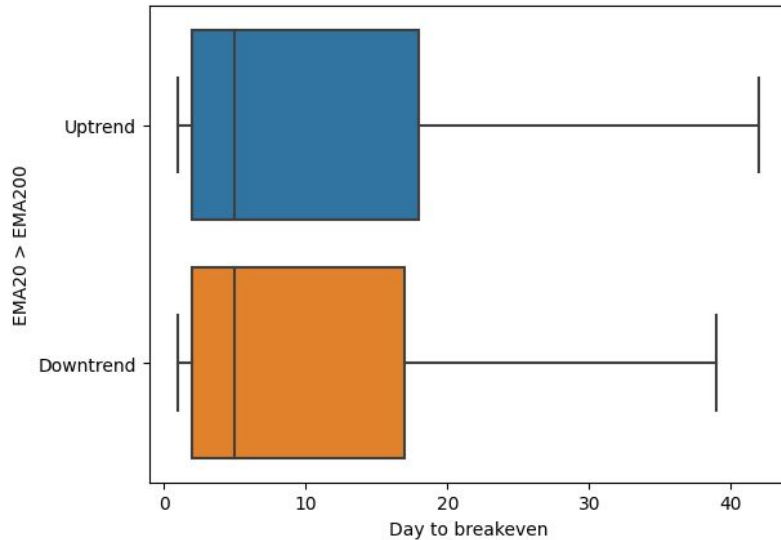
Day to Breakeven (Overall)

Time for stock price to return to the previous close



- 75% of recovery is within 20 days

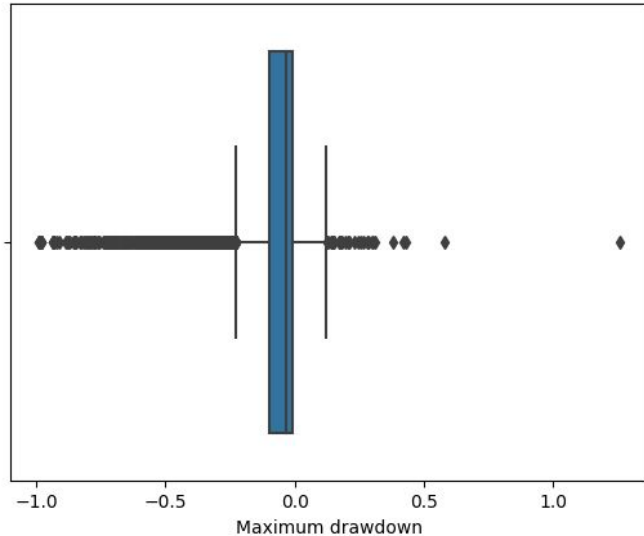
Day to Breakeven (by trend and trading volume)



- There is no much difference between uptrend and downtrend
- Fewer days to breakeven when the trading volume is lower

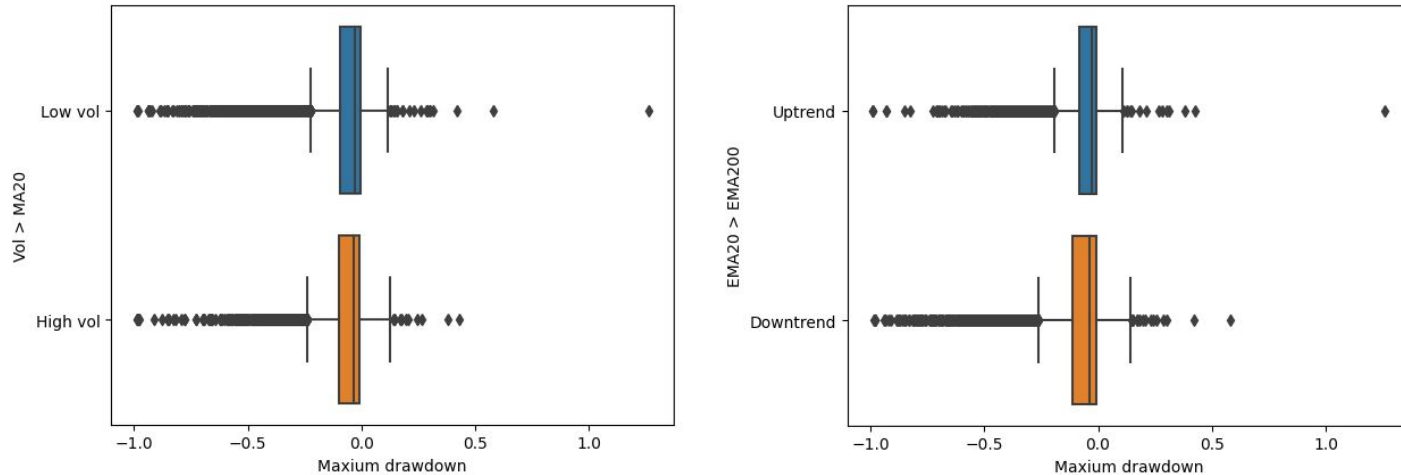
Maximun drawdown (Overall)

Maximun variation in price before recovery



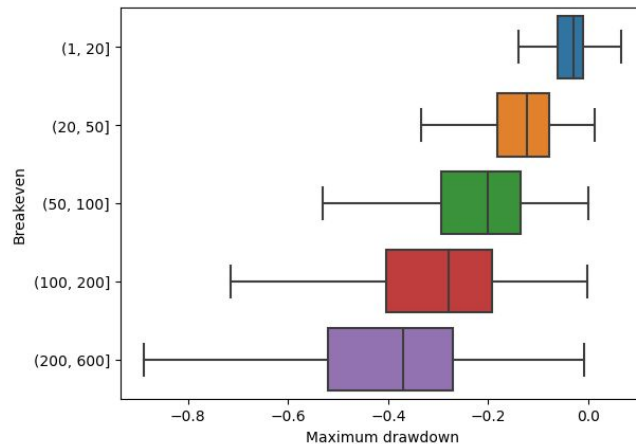
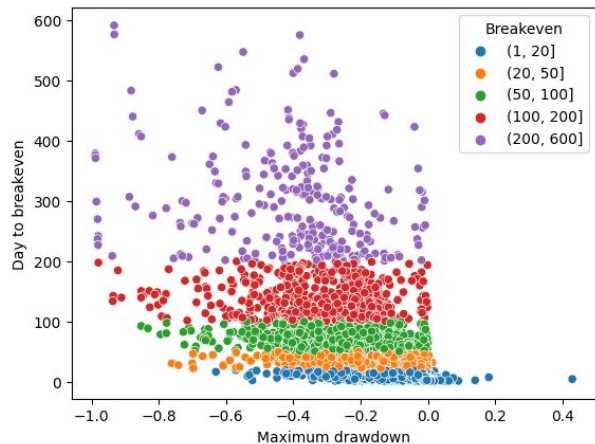
- Maximum drawdown: Up to 90%

Maximun drawdown (by trend and trading volume)



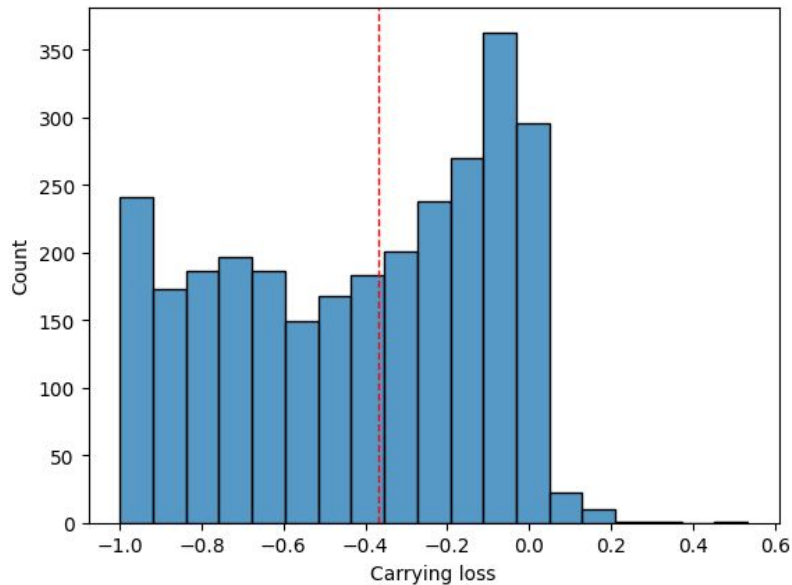
- There is no much difference between uptrend and downtrend as well as trading volume

Day to Breakeven vs Maximum drawdown



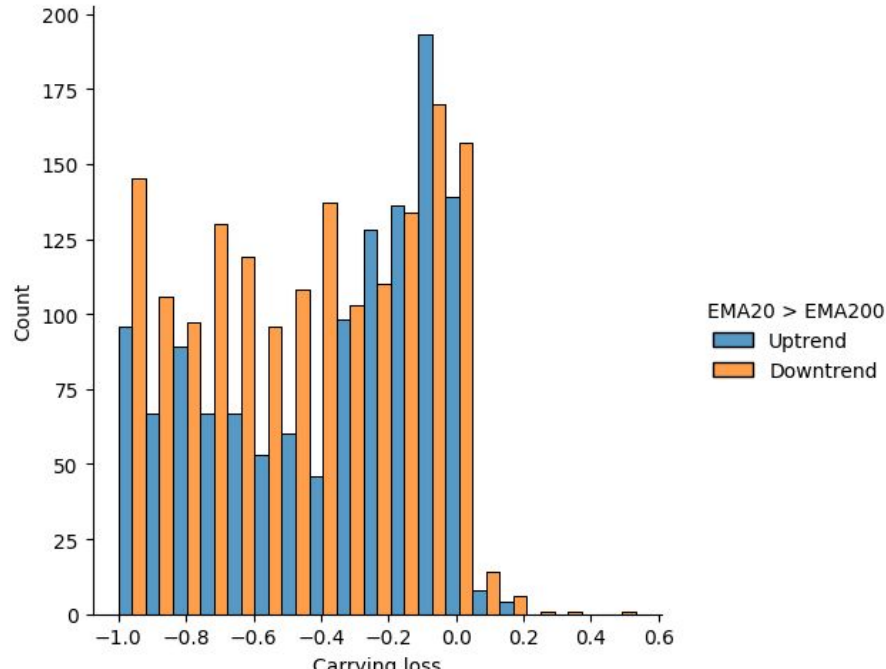
- No explicit relationship between Day to Breakeven and Maximum drawdown
- A drawdown to 20% is out of 75% sample in the range 1-20days and deserve attention

Loss on holding the unrecovered



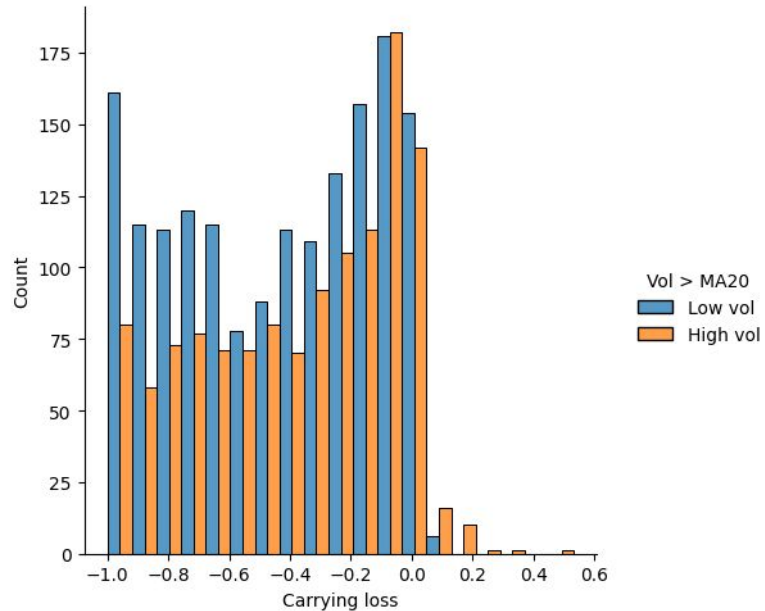
- 50% of them will accumulate more than around 40% further losses.

Loss on holding the unrecovered (Trend)



- Downtrend incurs more losses

Loss on holding the unrecovered (Trading volume)



- Low trading volume incurs more losses



Further exploration

- Recover rate in relation to difference indicators
- The price range in relation to recover rate