SwissScientific TECHNOLOGIES

Boltzmann Strategy

strategy description

The Boltzmann strategy is a pure artificial intelligence (AI) strategy. Deep learning techniques based on Boltzmann machines and advanced machine learning classification algorithms are used to identify prospective winners and losers in a universe of 100 blue chip stocks on a monthly basis given their performances of the last 5 months. The strategy is hedged by being always neutral: the same amount is invested long in winner stocks as short in looser stocks.

key facts

Currency : USD
Instruments : single stocks of the S&P100 index
Liquidity : daily
Risk factors : long positions, short positions, no derivatives
Trading : algorithmic, with human surveillance, only 12 trades per year

statistics (2008–2020)

Average net return : 23.44% (S&P500: 9.06%)
Average volatility : 10.69% (S&P500: 18.84%)
Average Sharpe Ratio : 1.91
Maximum draw-down : 7.41%
Live trading : since June 2019

historical performance

Year	P/L strategy	P/L S&P500	Vola strategy	Vola S&P500	Max. drawdown	Sharpe ratio
2008	48.97%	-38.49%	18.57%	40.97%	3.54%	2.54
2009	58.48%	23.45%	18.04%	27.29%	0.03%	3.22
2010	19.06%	12.78%	10.87%	18.05%	7.41%	1.72
2011	16.19%	0.00%	12.21%	23.27%	7.06%	1.31
2012	18.29%	13.32%	9.88%	12.88%	6.77%	1.83
2013	19.16%	29.73%	7.24%	10.97%	1.31%	2.63
2014	6.43%	11.41%	6.98%	11.19%	6.84%	0.90
2015	21.42%	-0.76%	11.00%	17.05%	3.88%	1.92
2016	18.58%	9.53%	8.80%	12.61%	1.73%	2.04
2017	14.83%	19.41%	9.15%	6.68%	3.52%	1.49
2018	36.68%	-7.71%	10.95%	17.06%	2.42%	3.14
2019	26.98%	28.88%	11.19%	12.55%	1.50%	2.23
2020	-0.40%	16.26%	4.08%	34.36%	4.53%	-0.19