

Broad Multi-Asset Long/Short

Description

The Multi-Asset Long/Short Strategy uses a systematic method based on machine learning algorithms that predict the relative performance of 55 liquid futures contracts and 5 different asset classes (Equity, Bonds, Commodities, Currencies and Volatility). The portfolio weights are proportional to the signals, which are the estimated probabilities of the relative performance of each asset. Rebalancing is carried out only if the correlation between desired and actual strategy weights is lower than a 0.925 threshold on a daily basis. Transaction costs are assumed 4 bps for all contracts.

Performance

Returns	2021 YTD	2020	2019	2018	2017	2016	2015
	2.8%	17.2%	7.9%	-7.0%	14.9%	4.9%	7.1%

Other Metrics

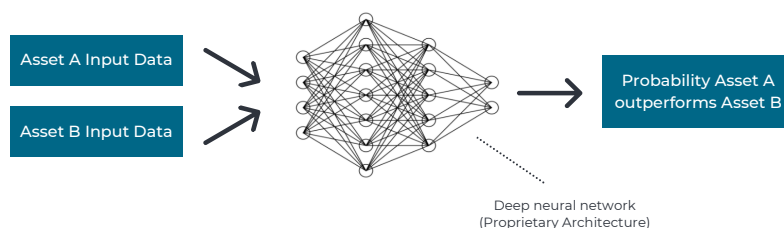
Starting Portfolio	\$ 10M	Sharpe Ratio	0.86
Final Portfolio	\$ 15.6M	Calmar Ratio	0.70
CAGR	7.1%	Sortino Ratio	1.21
Annual Vol	8.4%	Max Drawdown	-10.2%

Strategy Performance



Model Development

A machine learning model (deep neural network) is trained to predict the probability that any given asset A outperforms another asset B over a given time horizon. The model is trained on historical data of target assets and context indicators. The output of the model is used to rank all the assets in the investment universe.



Development Steps

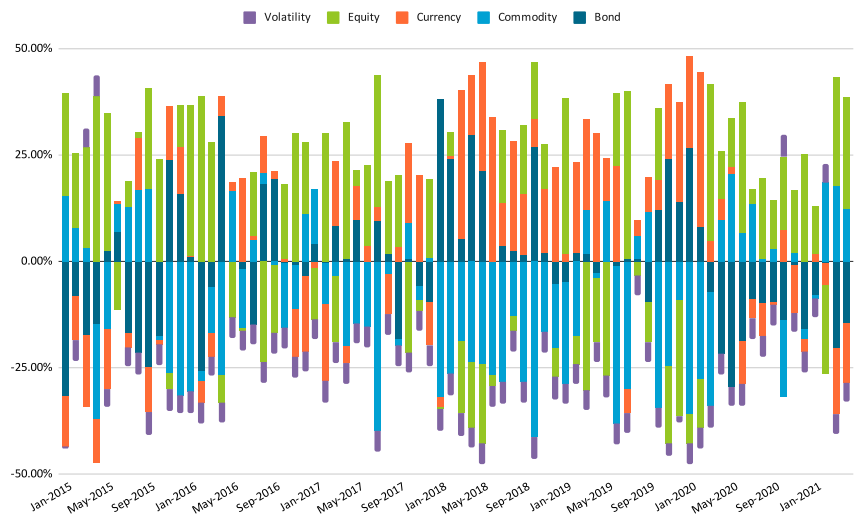
- A large number of candidate models is trained in an asset-agnostic supervised learning framework
- Hyperparameter optimization and input data selection is performed automatically using Genetic Algorithms
- An optimal ensemble of predictors is selected and used to produce test (out-of-sample) predictions

Traded Instruments

The Multi-Asset Long/Short Strategy trades liquid futures quoted at the Chicago Mercantile Exchange, Eurex Exchange, Intercontinental Exchange, London Metal Exchange, Hong Kong Exchange and others. The net asset class exposure of the strategy varies month by month and is totally determined by the predictions of the machine learning proprietary model.

Equities	Commodities	Currencies
E-Mini S&P500 Future	Brent Crude Oil	USD/AUD
E-Mini Nikkei 225 Future	Heating Oil	USD/CAD
Eurostoxx 50 Future	RBOB Gasoline	USD/CHF
Dax Future	Corn	USD/EUR
Hang Seng Index Future	Wheat	USD/GBP
FTSE 100 Index Future	Soybean Meal	USD/JPY
CAC 40	Soybean Oil	USD/NZD
Amsterdam AEX	Cotton	USD/BRL
Ibex 35	Sugar	USD/MXN
Canada S&P/TSX 60	Coffee	USD/PLN
OMX 30	Live Cattle	USD/SGD
Swiss SMI	Copper	USD/INR
Italian FTSE MIB	Aluminium	USD/WON
Japan TOPIX	Gold	
Australian S&P/ASX	Silver	
	Zinc	
Bonds	Volatility	
2Y US T-Note Future	Vix	
5Y US T-Note Future		
10Y US T-Note Future		
Euro Schatz Future		
Euro Bobl Future		
Euro Bund Future		
Long Gilt Future		
10Y Canadian Gvt		
10Y Japanese Gvt		
10Y Australian Gvt		

Net Asset Class exposure per month



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