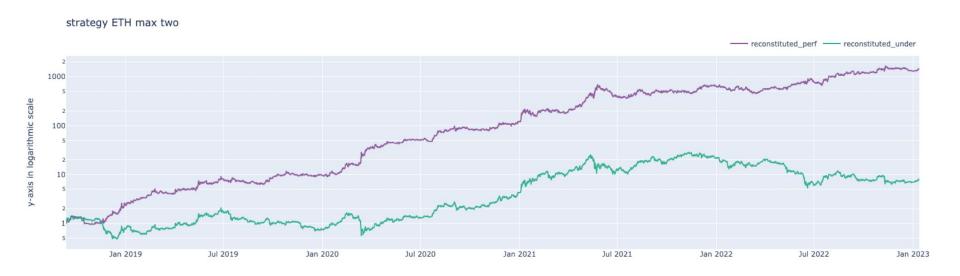
Short term models Spot market-Long Only Futures-Long/Short

Highly profitable intraday long/short strategies Highly robust, improve every underlying

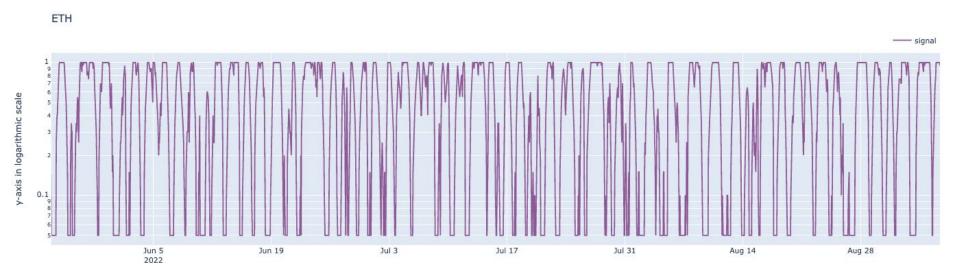


Highly profitable intraday long only strategies Highly robust, improve every underlying

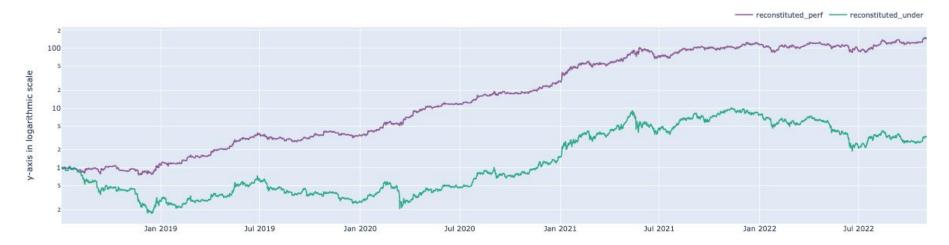


Models

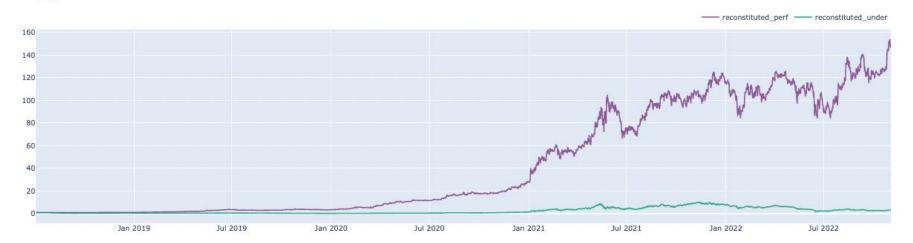
- Model 1: Hourly oscillating signal for a quick deleveraging
- Model 2: Hourly RSI cut off





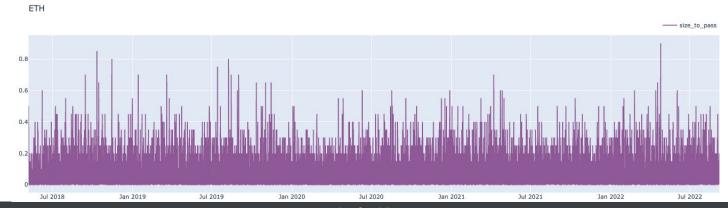






Metrics model 1

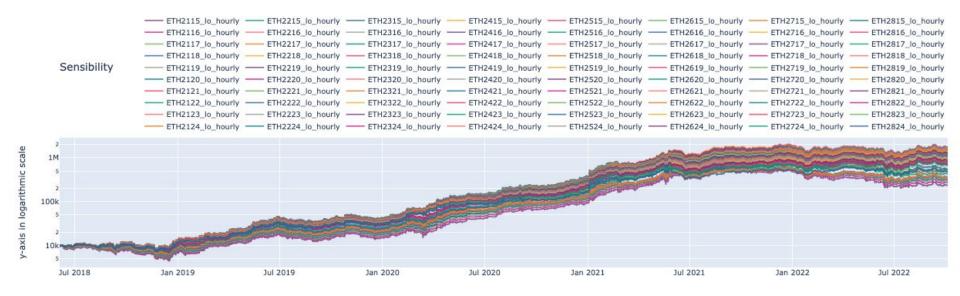
- 10 bps transaction costs hardcoded in backtest
- Average turn-over per hour : 5.6% of the asset



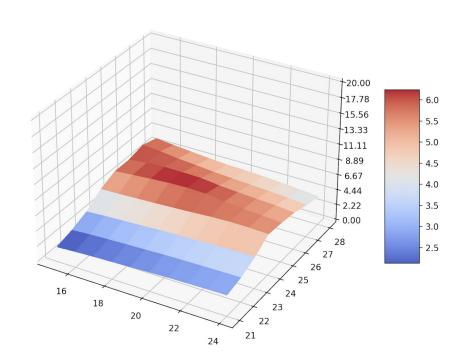
kpi_df							
	annual_return	annual_volatility	sharpe	calmar	mdd		
reconstituted_perf	2.12473	0.62767	3.38870	6.45498	0.32916		
reconstituted_under	0.19674	0.99484	0.19790	0.22111	0.88979		

Sensibility analysis

 We vary the strategy parameters model around its optimal to assess the robustness of the strategy.



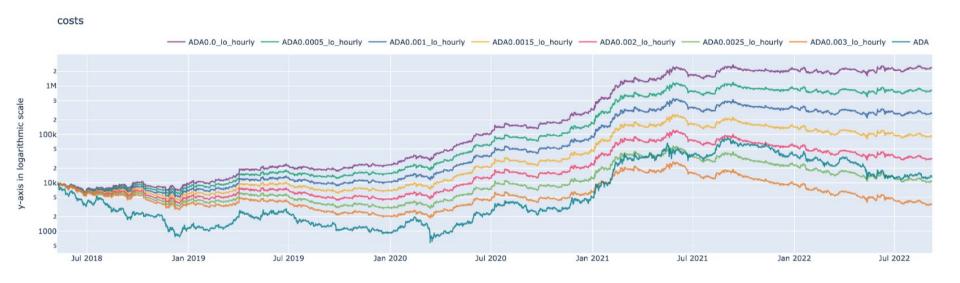
Calmar map for parameters variations



Results per parameters set

results_df							
lookback_window	pente_window		sharpe	annual_return			
		6.39656	3.37753	2.12418			
		6.33501	3.33568	2.08524			
		6.31457	3.44097	2.17858			
		6.24565	3.35663	2.15533			
	26	6.16436	3.35975	2.14658			
		6.15351	3.28118	2.08325			
		6.13804	3.49255	2.22379			
	26	6.09387	3.23993	2.04517			
		6.03545	3.27431	2.09274			
	26	6.00460	3.41958	2.19708			
	25	5.97535	3.28359	2.04147			
		5.92973	3.55382	2.27512			
	26	5.76664	3.18636	1.99957			
	26	5.73468	3.45323	2.23289			
		5.72821	3.59694	2.31747			
		5.71002	3.20666	2.03871			
		5.70760	3.23358	2.00127			
		5.67222	3.17847				
	24	5.65508	3.15518	1.93311			
	28	5.57770	3.21130	2.05924			
	26	5.56877	3.14522	1.96422			
	24	5.56738	3.20284	1.98302			
	25	5.56681	3.20202	1.97263			
	24	5.55331	3.12027	1.90268			
		5.48164	3.15850	1.99712			
	24	5.39473	3.23903	2.01637			
	26	5.39397	3.09750	1.92431			
		5.33358	3.13084	1.91951			
	28	5.30827	3.13088	1.99807			
	24	5.25444	3.27136	2.04913			
		5.25020	3.04172	1.88029			
		5.23449	3.10215	1.95079			
	24	5.10821	3.31299	2.08623			
		5.06063	3.04227	1.90408			
	28	5.06042	3.06514	1.94470			
	24	5.00245	3 36172	2 12775			

Transaction costs drive the profits



Model 2: RSI multi-frequency based model



Mix

