

Database exists, assume schema does, too.

Seasonal Indexes

	03-31	06-30	09-30	12-31
0	Energy ETF	Information Technology ETF	Information Technology ETF	Information Technology ETF
1	Information Technology ETF	Consumer Discretionary ETF	Consumer Discretionary ETF	Financials ETF
2	Utilities ETF	Energy ETF	SP500	Materials ETF
3	SP1500	Materials ETF	Industrials ETF	SP600
4	Industrials ETF	SP1500	SP1500	Consumer Discretionary ETF
5	SP500	SP500	Health Care ETF	SP400
6	SP600	SP600	Utilities ETF	SP500
7	Health Care ETF	SP400	Consumer Staples ETF	SP1500
8	Consumer Staples ETF	Health Care ETF	Financials ETF	Health Care ETF
9	SP400	Communication Services ETF	Materials ETF	Consumer Staples ETF
10	Financials ETF	Real Estate ETF	Communication Services ETF	Energy ETF
11	Consumer Discretionary ETF	Financials ETF	SP400	Utilities ETF
12	Real Estate ETF	Industrials ETF	Real Estate ETF	Industrials ETF
13	Materials ETF	Consumer Staples ETF	SP600	Real Estate ETF
14	Communication Services ETF	Utilities ETF	Energy ETF	Communication Services ETF

	03-31	06-30	09-30	12-31
SP1500	-0.010622	0.081757	0.041626	0.049958
SP500	-0.011990	0.080771	0.045646	0.050086
SP600	-0.017768	0.080509	0.019158	0.057970
SP400	-0.019859	0.080174	0.020554	0.051549
Communication Services ETF	-0.032872	0.075995	0.022591	0.017899
Consumer Discretionary ETF	-0.021214	0.120254	0.052510	0.052777
Consumer Staples ETF	-0.018663	0.035480	0.034807	0.045915
Energy ETF	0.055913	0.096281	-0.039735	0.042416
Financials ETF	-0.020711	0.061049	0.030176	0.065446
Health Care ETF	-0.017923	0.078706	0.041045	0.047467
Industrials ETF	-0.011020	0.058300	0.045427	0.039920
Information Technology ETF	0.006217	0.121831	0.068693	0.067531
Materials ETF	-0.026671	0.082827	0.027940	0.058669
Real Estate ETF	-0.026416	0.075756	0.019424	0.038472
Utilities ETF	-0.001263	0.026125	0.039218	0.042001

Note if the final data in the prices ends on a quarter, this will aggregate into the seasonal_index above and there will be no comparison
Current

06-17

Energy ETF	-0.043815
Consumer Staples ETF	-0.096218
Utilities ETF	-0.125888
Health Care ETF	-0.134327
Materials ETF	-0.161041
SP600	-0.165794
Industrials ETF	-0.178228
SP1500	-0.184779
Financials ETF	-0.187815
SP500	-0.189930
Real Estate ETF	-0.190735
SP400	-0.192427
Communication Services ETF	-0.226489
Information Technology ETF	-0.232112
Consumer Discretionary ETF	-0.260025

standard deviations

	03-31	06-30	09-30	12-31
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SP1500	0.134644	0.072380	0.037999	0.110320
SP500	0.127411	0.070450	0.039033	0.106496
SP600	0.199479	0.088447	0.037096	0.179394
SP400	0.157662	0.100224	0.037075	0.138781
Communication Services ETF	0.138244	0.095192	0.045269	0.123434
Consumer Discretionary ETF	0.151791	0.146922	0.083611	0.127243
Consumer Staples ETF	0.096633	0.035421	0.049261	0.063730
Energy ETF	0.369457	0.166709	0.099129	0.202483
Financials ETF	0.192299	0.053666	0.014462	0.140299
Health Care ETF	0.079810	0.054107	0.065798	0.098650
Industrials ETF	0.178470	0.072339	0.066050	0.134044
Information Technology ETF	0.135329	0.113409	0.054569	0.136753
Materials ETF	0.163483	0.099766	0.065317	0.127072
Real Estate ETF	0.161483	0.056090	0.032025	0.078165
Utilities ETF	0.092016	0.021473	0.033841	0.054883

t scores

	03-31	06-30	09-30	12-31
SP1500	-0.035281	0.505153	0.489908	0.202519
SP500	-0.042087	0.512730	0.522980	0.210329
SP600	-0.039834	0.407076	0.230960	0.144515
SP400	-0.056330	0.357747	0.247928	0.166115
Communication Services ETF	-0.106341	0.357027	0.223180	0.064848
Consumer Discretionary ETF	-0.062503	0.366041	0.280865	0.185493
Consumer Staples ETF	-0.086371	0.447954	0.315992	0.322196
Energy ETF	0.067680	0.258283	-0.179260	0.093682
Financials ETF	-0.048166	0.508740	0.933164	0.208614
Health Care ETF	-0.100433	0.650529	0.278976	0.215182
Industrials ETF	-0.027615	0.360421	0.307577	0.133187
Information Technology ETF	0.020546	0.480423	0.562966	0.220841
Materials ETF	-0.072960	0.371283	0.191302	0.206478
Real Estate ETF	-0.073157	0.604012	0.271246	0.220111
Utilities ETF	-0.006140	0.544116	0.518265	0.342246

p values

	03-31	06-30	09-30	12-31
SP1500	0.487036	0.675887	0.671106	0.573766
SP500	0.484537	0.678247	0.681422	0.576557
SP600	0.485364	0.644372	0.583899	0.552872
SP400	0.479310	0.627889	0.589904	0.560685
Communication Services ETF	0.461012	0.627646	0.581136	0.523813
Consumer Discretionary ETF	0.477047	0.630688	0.601465	0.567662
Consumer Staples ETF	0.468307	0.657720	0.613641	0.615774
Energy ETF	0.524851	0.593553	0.434579	0.534366
Financials ETF	0.482306	0.677006	0.790214	0.575945
Health Care ETF	0.463168	0.719135	0.600805	0.578288
Industrials ETF	0.489852	0.628793	0.610739	0.548761
Information Technology ETF	0.507551	0.668108	0.693606	0.580304
Materials ETF	0.473215	0.632451	0.569748	0.575182
Real Estate ETF	0.473143	0.705773	0.598102	0.580044
Utilities ETF	0.497743	0.687902	0.679964	0.622630

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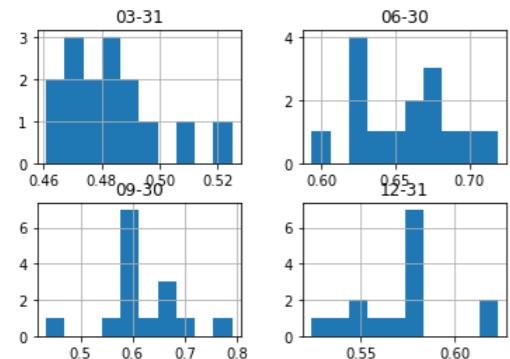
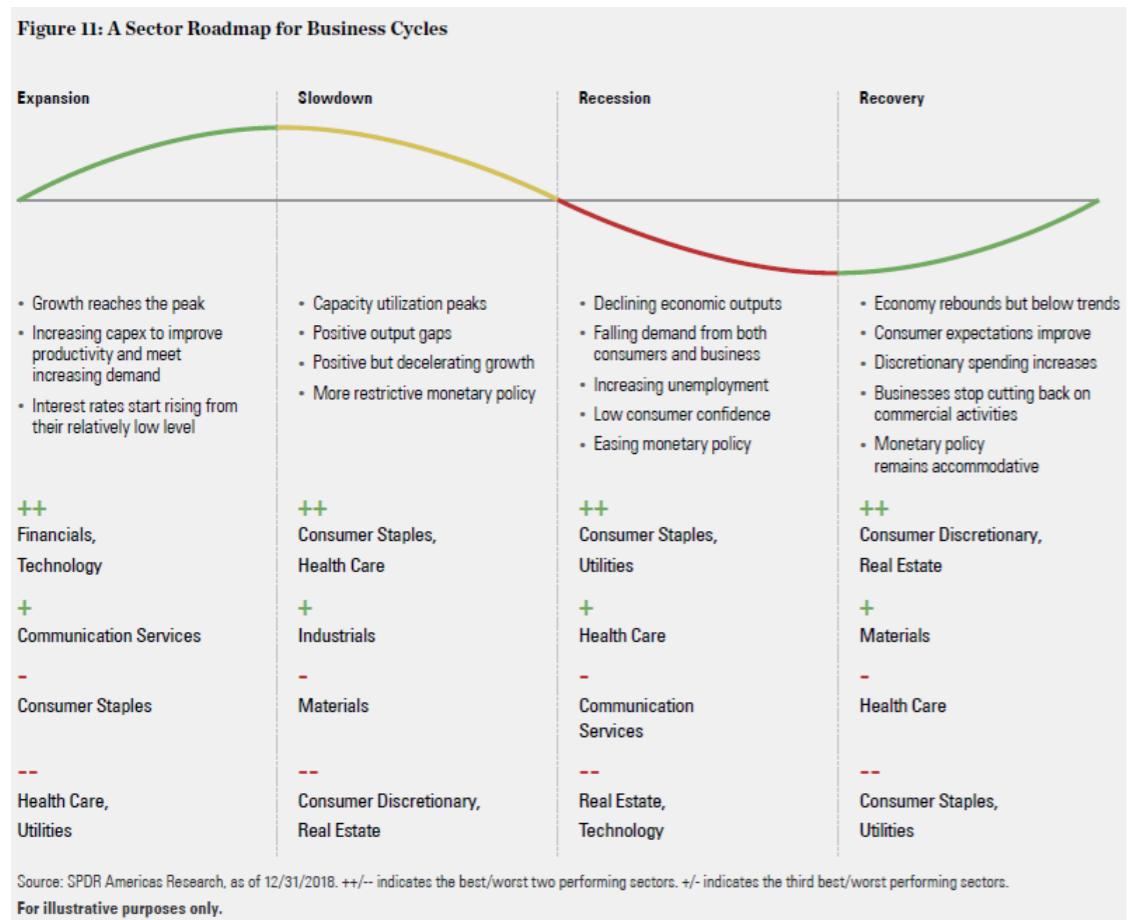


Figure 11: A Sector Roadmap for Business Cycles



Cycles

	<u>Expansion</u>	<u>Slowdown</u>	<u>Recession</u>	<u>Recovery</u>
Strongest	Tech Financials Real Estate Consumer D Industrials Materials Energy Healthcare Cons. Staples Utilities	Cons. Staples Healthcare Industrials Utilities Tech Energy Financials Materials Consumer D Real Estate	Cons. Staples Energy Utilities Healthcare Consumer D Materials Industrials Financials Tech Real Estate	Real Estate Consumer D Materials Tech Industrials Energy Financials Healthcare Cons. Staples Utilities
Weakest				

	Energy ETF	Consumer Staples ETF	Utilities ETF	Health Care ETF	Materials ETF	SP600	Industrials ETF	SP1500	Financials ETF	SP500	Real Estate ETF	SP400	Communication Services ETF	Information Technology ETF	Consumer Discretionary ETF
2017-03-31 00:00:00	nan	nan	nan	nan	nan	nan	nan	nan	nan	nan	nan	nan	nan	nan	nan
2017-06-30 00:00:00	-0.078709	0.010040	0.022113	0.072895	0.026999	0.018327	0.042167	0.030375	0.038955	0.030708	0.017375	0.031752	-0.024136	0.041388	0.028386
2017-09-30 00:00:00	0.069612	-0.012346	0.031518	0.040565	0.066617	0.064962	0.052781	0.044807	0.052789	0.045666	0.008095	0.035020	0.015498	0.083223	0.014521
2017-12-31 00:00:00	0.073946	0.059268	0.000687	0.018576	0.071798	0.038747	0.066175	0.066880	0.073683	0.069917	0.012742	0.074139	0.000763	0.093087	0.097848
2018-03-31 00:00:00	-0.078807	-0.073521	-0.033734	-0.020049	-0.072483	-0.011631	-0.033542	-0.021321	-0.015065	-0.024130	-0.086159	-0.003978	-0.085669	0.020711	-0.001942
2018-06-30 00:00:00	0.150528	0.006353	0.053422	0.055259	0.036210	0.106722	-0.008057	0.052094	-0.011331	0.047568	0.094633	0.045520	0.035862	0.080437	0.088528
2018-09-30 00:00:00	0.021911	0.050064	0.019751	0.137698	0.007338	0.032842	0.094874	0.070536	0.031675	0.078236	0.000044	0.032902	0.023115	0.117719	0.066008
2018-12-31 00:00:00	-0.267451	-0.055862	0.009925	-0.108129	-0.154310	-0.193040	-0.183620	-0.142834	-0.138848	-0.137319	-0.058855	-0.172165	-0.143117	-0.174415	-0.162070
2019-03-31 00:00:00	0.178564	0.111156	0.103055	0.081835	0.126958	0.124660	0.183161	0.151853	0.109942	0.144236	0.173365	0.157497	0.139541	0.217473	0.157197
2019-06-30 00:00:00	-0.048754	0.036556	0.035855	0.017469	0.040951	0.010843	0.034436	0.039106	0.067026	0.040369	0.015389	0.030815	0.035928	0.054745	0.040127
2019-09-30 00:00:00	-0.075658	0.056319	0.090872	-0.035439	-0.013089	-0.004200	0.004465	0.006291	0.013235	0.011423	0.075811	-0.009122	-0.002023	0.016115	0.002509
2019-12-31 00:00:00	0.054552	0.036517	0.002011	0.147851	0.066971	0.082573	0.058155	0.090490	0.096390	0.089876	0.005745	0.066590	0.086727	0.139034	0.056223
2020-03-31 00:00:00	-0.523877	-0.141472	-0.141270	-0.131539	-0.278876	-0.328050	-0.279339	-0.205302	-0.330709	-0.194477	-0.241350	-0.247693	-0.187109	-0.131215	-0.231167
2020-06-30 00:00:00	0.332245	0.094561	0.024507	0.164463	0.260712	0.223617	0.182339	0.206715	0.135641	0.201618	0.135399	0.259149	0.224230	0.318555	0.379795
2020-09-30 00:00:00	-0.188315	0.098022	0.051209	0.062281	0.120651	0.032878	0.118587	0.086119	0.028859	0.090383	0.013268	0.068091	0.097573	0.120087	0.192380
2020-12-31 00:00:00	0.300830	0.074374	0.073335	0.101111	0.172363	0.312278	0.178685	0.132216	0.253698	0.121185	0.092916	0.211458	0.182130	0.138205	0.172875
2021-03-31 00:00:00	0.324479	0.030385	0.031042	0.025327	0.105419	0.184526	0.116450	0.070761	0.165207	0.063518	0.087920	0.084662	0.083288	0.015110	0.073815
2021-06-30 00:00:00	0.126094	0.029888	-0.005272	0.083442	0.049264	0.043034	0.040613	0.080495	0.074954	0.083593	0.115985	0.033635	0.108092	0.114030	0.064435
2021-09-30 00:00:00	-0.026222	-0.018026	0.002739	0.000121	-0.041816	-0.030694	-0.043573	0.000378	0.024323	0.002523	-0.000098	-0.024123	-0.021207	0.006319	-0.012866
2021-12-31 00:00:00	0.050203	0.115277	0.124048	0.077925	0.136524	0.049293	0.080207	0.103038	0.042310	0.106772	0.139811	0.077726	-0.037011	0.141743	0.099010
2022-03-31 00:00:00	0.379204	-0.019862	0.034591	-0.045192	-0.014374	-0.058344	-0.041831	-0.049102	-0.032929	-0.049099	-0.065856	-0.089783	-0.114414	-0.090992	-0.103975
2022-06-17 00:00:00	-0.043815	-0.096218	-0.125888	-0.134327	-0.161041	-0.165794	-0.178228	-0.184779	-0.187815	-0.189930	-0.190735	-0.192427	-0.226489	-0.232112	-0.260025

AnalyzeSP1500-Backup

	2017-03-31 00:00:00	2017-06-30 00:00:00	2017-09-30 00:00:00	2017-12-31 00:00:00	2018-03-31 00:00:00	2018-06-30 00:00:00	2018-09-30 00:00:00	2018-12-31 00:00:00	2019-03-31 00:00:00	2019-06-30 00:00:00	2019-09-30 00:00:00	2019-12-31 00:00:00	2020-03-31 00:00:00	2020-06-30 00:00:00	2020-09-30 00:00:00	2020-12-31 00:00:00	2021-03-31 00:00:00	2021-06-30 00:00:00	2021-09-30 00:00:00	2021-12-31 00:00:00	2022-03-31 00:00:00	2022-06-17 00:00:00
0	Health Care ETF	Information Technology ETF	Consumer Discretionary ETF	Information Technology ETF	Energy ETF	Health Care ETF	Utilities ETF	Information Technology ETF	Financials ETF	Utilities ETF	Health Care ETF	Information Technology ETF	Consumer Discretionary ETF	Consumer Discretionary ETF	SP600	Energy ETF	Energy ETF	Financials ETF	Information Technology ETF	Energy ETF	Energy ETF	Energy ETF
	Industrials ETF	Energy ETF	Information Technology ETF	Consumer Discretionary ETF	SP600	Information Technology ETF	Consumer Staples ETF	Industrials ETF	Information Technology ETF	Real Estate ETF	Information Technology ETF	Health Care ETF	Energy ETF	Materials ETF	Energy ETF	SP600	Real Estate ETF	Information Technology ETF	Real Estate ETF	Utilities ETF	Consumer Staples ETF	Consumer Staples ETF
	Information Technology ETF	Materials ETF	SP400	SP400	Real Estate ETF	Industrials ETF	Real Estate ETF	Energy ETF	Materials ETF	Consumer Staples ETF	Financials ETF	Utilities ETF	Information Technology ETF	Information Technology ETF	Financials ETF	Financials ETF	Information Technology ETF	Utilities ETF	Materials ETF	Materials ETF	Utilities ETF	Utilities ETF
	Financials ETF	SP600	Energy ETF	SP600	Consumer Discretionary ETF	SP500	Health Care ETF	Real Estate ETF	SP500	Information Technology ETF	SP1500	Consumer Staples ETF	Materials ETF	Industrials ETF	SP400	Industrials ETF	Communication Services ETF	SP500	Utilities ETF	Consumer Staples ETF	Health Care ETF	Health Care ETF
	SP400	Financials ETF	Financials ETF	Financials ETF	Information Technology ETF	SP1500	SP500	SP400	Consumer Discretionary ETF	Financials ETF	SP500	Communication Services ETF	SP400	Consumer Staples ETF	Communication Services ETF	Materials ETF	SP500	SP1500	Consumer Staples ETF	Financials ETF	Materials ETF	Materials ETF
	SP500	Industrials ETF	Materials ETF	Health Care ETF	Health Care ETF	Consumer Discretionary ETF	Financials ETF	Consumer Discretionary ETF	SP1500	SP500	Communication Services ETF	SP500	Communication Services ETF	Communication Services ETF	Industrials ETF	Real Estate ETF	Health Care ETF	Health Care ETF	SP500	Industrials ETF	SP600	SP600
	SP1500	SP500	SP500	SP1500	Utilities ETF	Consumer Staples ETF	SP1500	SP1500	Consumer Staples ETF	SP1500	SP600	SP1500	SP600	SP500	SP600	SP500	SP400	SP1500	Real Estate ETF	SP1500	Health Care ETF	Industrials ETF
	Consumer Discretionary ETF	SP1500	SP1500	SP1500	SP500	SP1500	SP400	Communication Services ETF	SP500	Communication Services ETF	Industrials ETF	Materials ETF	Consumer Discretionary ETF	SP1500	SP1500	Materials ETF	Communication Services ETF	Financials ETF	Consumer Discretionary ETF	Consumer Discretionary ETF	SP500	SP1500
	Materials ETF	Health Care ETF	Industrials ETF	Industrials ETF	SP500	SP600	Materials ETF	Communication Services ETF	Communication Services ETF	Utilities ETF	Consumer Discretionary ETF	SP400	Real Estate ETF	SP500	SP400	Information Technology ETF	Consumer Discretionary ETF	Consumer Discretionary ETF	Consumer Staples ETF	Industrials ETF	SP1500	Financials ETF
	Utilities ETF	SP400	Consumer Staples ETF	Utilities ETF	SP400	Financials ETF	Consumer Discretionary ETF	Materials ETF	Industrials ETF	Communication Services ETF	Industrials ETF	SP400	Industrials ETF	Health Care ETF	SP1500	SP1500	Materials ETF	Communication Services ETF	Health Care ETF	SP600	SP500	SP500
	SP600	Utilities ETF	SP600	Materials ETF	Materials ETF	Communication Services ETF	SP400	SP600	SP400	SP600	Consumer Discretionary ETF	Materials ETF	Health Care ETF	Utilities ETF	SP500	SP500	SP600	SP600	SP400	SP400	Real Estate ETF	Real Estate ETF
	Real Estate ETF	Communication Services ETF	Health Care ETF	Consumer Staples ETF	Communication Services ETF	Energy ETF	Information Technology ETF	Consumer Staples ETF	Health Care ETF	SP400	Energy ETF	Industrials ETF	Financials ETF	SP600	Health Care ETF	Utilities ETF	Industrials ETF	Energy ETF	Energy ETF	SP400	SP400	SP400
	Consumer Staples ETF	Consumer Discretionary ETF	Real Estate ETF	Energy ETF	Consumer Staples ETF	Utilities ETF	Industrials ETF	Financials ETF	Real Estate ETF	Materials ETF	Consumer Staples ETF	SP600	Real Estate ETF	Financials ETF	Real Estate ETF	Consumer Staples ETF	SP400	SP600	SP600	Information Technology ETF	Communication Services ETF	Communication Services ETF
	Communication Services ETF	Real Estate ETF	Communication Services ETF	Communication Services ETF	Industrial ETF	Materials ETF	SP600	Utilities ETF	SP600	Health Care ETF	Real Estate ETF	Financials ETF	Consumer Staples ETF	Real Estate ETF	Consumer Staples ETF	Health Care ETF	Consumer Staples ETF	Materials ETF	Financials ETF	Consumer Discretionary ETF	Information Technology ETF	Information Technology ETF
	Energy ETF	Consumer Staples ETF	Utilities ETF	Real Estate ETF	Financials ETF	Real Estate ETF	Energy ETF	Health Care ETF	Energy ETF	Energy ETF	Utilities ETF	Utilities ETF	Energy ETF	Utilities ETF	Energy ETF	Information Technology ETF	Utilities ETF	Industrials ETF	Communication Services ETF	Communication Services ETF	Consumer Discretionary ETF	Consumer Discretionary ETF

Comparative to Seasonal Indexes, tells you who is over or underperforming.

This is Seasonal Index - Extrapolated Current Quarter.

+: seasonal > current

-: current > seasonal

Note if the final data in the prices ends on a quarter, this will aggregate into the seasonal_index above and there will be no comparison

2022-06-17

Information Technology ETF	0.105318
Consumer Discretionary ETF	0.103945
Energy ETF	0.083099
Materials ETF	0.071426
SP1500	0.070498
SP500	0.069644
SP600	0.069416
SP400	0.069126
Health Care ETF	0.067854
Communication Services ETF	0.065505
Real Estate ETF	0.065298
Financials ETF	0.052571
Industrials ETF	0.050194
Consumer Staples ETF	0.030500
Utilities ETF	0.022444

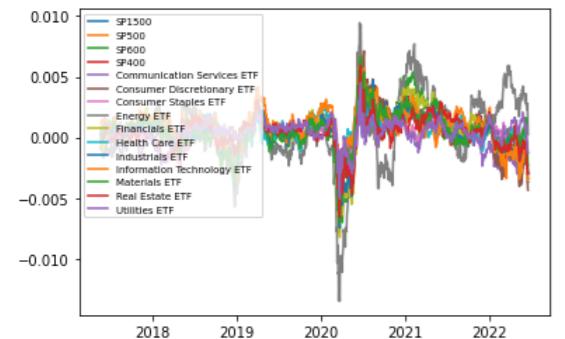
2017-03-31 00:00:00	2017-06-30 00:00:00	2017-09-30 00:00:00	2017-12-31 00:00:00	2018-03-31 00:00:00	2018-06-30 00:00:00	2018-09-30 00:00:00	2018-12-31 00:00:00	2019-03-31 00:00:00	2019-06-30 00:00:00	2019-09-30 00:00:00	2019-12-31 00:00:00	2020-03-31 00:00:00	2020-06-30 00:00:00	2020-09-30 00:00:00	2020-12-31 00:00:00	2021-03-31 00:00:00	2021-06-30 00:00:00	2021-09-30 00:00:00	2021-12-31 00:00:00	2022-03-31 00:00:00	2022-06-17 00:00:00
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0	Utilities ETF	Energy ETF	Consumer Discretionary ETF	Consumer Discretionary ETF	Energy ETF	Health Care ETF	Utilities ETF	Information Technology ETF	Utilities ETF	Real Estate ETF	Health Care ETF	Health Care ETF	Consumer Discretionary ETF	Consumer Discretionary ETF	Energy ETF	Energy ETF	Real Estate ETF	Energy ETF	Real Estate ETF	Energy ETF	Information Technology ETF
1	Health Care ETF	SP600	Energy ETF	SP400	Utilities ETF	Energy ETF	Real Estate ETF	Real Estate ETF	Financials ETF	Utilities ETF	Information Technology ETF	Consumer Staples ETF	Energy ETF	Materials ETF	SP600	SP600	Communication Services ETF	Financials ETF	Utilities ETF	Utilities ETF	Consumer Discretionary ETF
2	Industrials ETF	Materials ETF	Industrials ETF	Information Technology ETF	SP600	Industrials ETF	Consumer Staples ETF	Industrials ETF	Consumer Staples ETF	Consumer Staples ETF	Communication Services ETF	Information Technology ETF	Information Technology ETF	Communication Services ETF	Financials ETF	Financials ETF	Energy ETF	Real Estate ETF	Materials ETF	Materials ETF	Energy ETF
3	Financials ETF	Financials ETF	Information Technology ETF	SP600	Real Estate ETF	Information Technology ETF	Health Care ETF	Consumer Discretionary ETF	Industrials ETF	Financials ETF	SP1500	Utilities ETF	SP400	Industrials ETF	Communication Services ETF	Materials ETF	Financials ETF	Utilities ETF	Information Technology ETF	Consumer Staples ETF	Materials ETF
4	Consumer Staples ETF	Information Technology ETF	SP400	Financials ETF	Health Care ETF	SP500	Communication Services ETF	SP400	Communication Services ETF	SP600	SP500	Communication Services ETF	Materials ETF	Consumer Staples ETF	SP400	Industrials ETF	Health Care ETF	Health Care ETF	Consumer Staples ETF	Financials ETF	SP1500
5	SP400	SP400	SP500	Health Care ETF	Consumer Staples ETF	SP1500	SP500	Communication Services ETF	SP500	Communication Services ETF	Financials ETF	SP500	Communication Services ETF	Industrials ETF	Communication Services ETF	SP500	SP500	SP500	Health Care ETF	SP500	SP500
6	SP500	Industrials ETF	SP1500	SP1500	SP1500	Consumer Staples ETF	SP1500	SP1500	Materials ETF	SP400	SP600	SP1500	SP600	SP400	Consumer Discretionary ETF	Real Estate ETF	SP1500	SP500	SP1500	Industrials ETF	SP600
7	SP1500	SP1500	Consumer Staples ETF	SP500	Consumer Discretionary ETF	SP600	Financials ETF	SP500	SP1500	SP500	Industrials ETF	Consumer Discretionary ETF	SP1500	SP500	Materials ETF	SP400	Consumer Staples ETF	Communication Services ETF	SP500	SP400	SP400
8	Materials ETF	SP500	Materials ETF	Industrials ETF	SP500	Consumer Discretionary ETF	SP400	Materials ETF	SP400	SP1500	SP400	Real Estate ETF	Industrials ETF	SP1500	SP1500	Consumer Discretionary ETF	SP400	Industrials ETF	SP1500	Health Care ETF	
9	Real Estate ETF	Health Care ETF	Financials ETF	Utilities ETF	SP400	SP400	Consumer Discretionary ETF	SP600	Real Estate ETF	Energy ETF	Energy ETF	SP400	SP500	Health Care ETF	SP500	SP1500	Industrials ETF	SP600	Health Care ETF	Real Estate ETF	Communication Services ETF
10	SP600	Communication Services ETF	Communication Services ETF	Materials ETF	Communication Services ETF	Financials ETF	Industrials ETF	Financials ETF	Health Care ETF	Industrials ETF	Materials ETF	Materials ETF	Health Care ETF	SP600	Information Technology ETF	SP500	Utilities ETF	Consumer Staples ETF	SP400	SP600	Real Estate ETF
11	Information Technology ETF	Utilities ETF	SP600	Communication Services ETF	Information Technology ETF	SP400	Consumer Staples ETF	Information Technology ETF	Materials ETF	Consumer Discretionary ETF	Industrials ETF	Financials ETF	Utilities ETF	Real Estate ETF	Consumer Staples ETF	Materials ETF	Information Technology ETF	Energy ETF	SP400	Financials ETF	
12	Consumer Discretionary ETF	Real Estate ETF	Real Estate ETF	Consumer Staples ETF	Materials ETF	Real Estate ETF	Information Technology ETF	Energy ETF	SP600	Consumer Discretionary ETF	Consumer Staples ETF	Financials ETF	Real Estate ETF	Financials ETF	Health Care ETF	Health Care ETF	SP600	Consumer Discretionary ETF	SP600	Communication Services ETF	Industrials ETF
13	Communication Services ETF	Consumer Discretionary ETF	Health Care ETF	Real Estate ETF	Industrials ETF	Utilities ETF	SP600	Utilities ETF	Consumer Discretionary ETF	Information Technology ETF	Real Estate ETF	SP600	Consumer Staples ETF	Real Estate ETF	Utilities ETF	Utilities ETF	SP400	Materials ETF	Financials ETF	Consumer Discretionary ETF	Consumer Staples ETF
14	Energy ETF	Consumer Staples ETF	Utilities ETF	Energy ETF	Financials ETF	Materials ETF	Energy ETF	Health Care ETF	Energy ETF	Health Care ETF	Utilities ETF	Energy ETF	Utilities ETF	Energy ETF	Energy ETF	Consumer Staples ETF	Information Technology ETF	Consumer Discretionary ETF	Industrials ETF	Communication Services ETF	Information Technology ETF

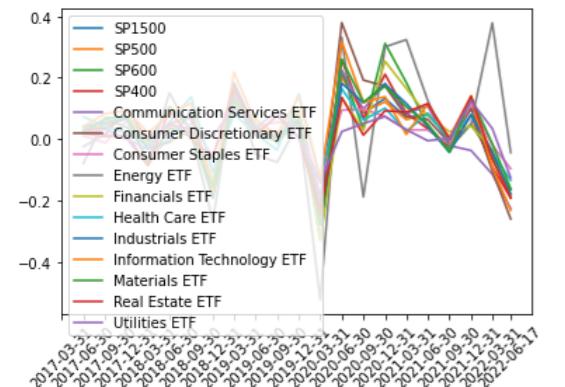
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0	SP500	SPY	-3.791861
1	SP1500	SPTM	-3.879022
2	SP400	MDYG	-5.134573
3	SP600	SLY	-5.242200

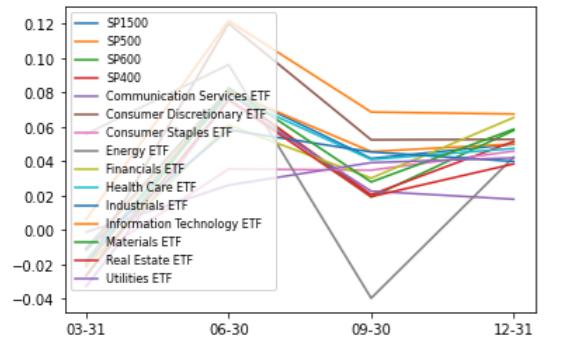
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3	VDE	-0.123306	Energy ETF
2	VDC	-2.283970	Consumer Staples ETF
10	VPU	-2.520459	Utilities ETF
9	VNQ	-3.053370	Real Estate ETF
8	VAW	-3.165271	Materials ETF
5	VHT	-3.323632	Health Care ETF
6	VIS	-4.514668	Industrials ETF
4	VFH	-4.617891	Financials ETF
1	VCR	-4.721407	Consumer Discretionary ETF
7	VGT	-4.954472	Information Technology ETF
0	VOX	-8.783598	Communication Services ETF

Rolling Quarterly Mean Return



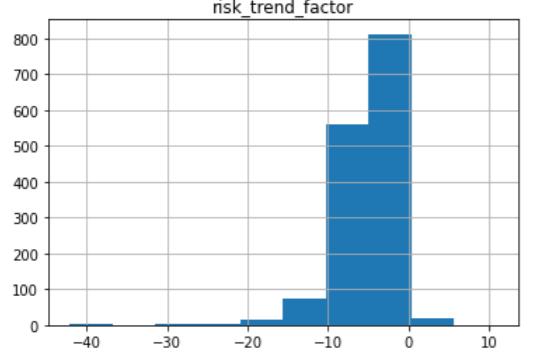
Quarterly Returns





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ACC	64.230003	49.209999	65.019997	65.019997	10.926848	2.134689	0.978004	0.420279	Real Estate	SP400	NaN	NaN	
MTOR	35.939999	32.93	36.279999	36.279999	5.065223	1.664475	0.319063	0.43585	error	SP600	NaN	NaN	
TVTY	32.130001	27.870001	32.889999	32.889999	2.341879	1.643789	0.518794	0.448871	Healthcare	SP600	NaN	NaN	
BANF	94.860001	77.379997	86.82	86.82	2.011991	1.135864	0.955166	0.536352	error	SP600	NaN	NaN	
Y	830.5	737.890015	862.869995	862.869995	1.771776	1.56538	0.382688	0.459685	Financial Services	SP400	NaN	NaN	
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CTXS	NaN	NaN	NaN	NaN	-5.480815	NaN	NaN	NaN	Technology	NaN	SP500	SPY	
OFG	NaN	NaN	NaN	NaN	-2.122353	NaN	NaN	NaN	error	NaN	SP600	SLY	
LYLT	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	Technology	NaN	SP600	SLY	
CHTR	NaN	NaN	NaN	NaN	-9.364464	NaN	NaN	NaN	Communication Services	NaN	SP500	SPY	
SPY	NaN	NaN	NaN	NaN	-3.791861	NaN	NaN	NaN	error	NaN	NaN	NaN	

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Symbol	index	MIN_Lookback_One_Year	MIN_Lookback_2_Months	MIN_Lookback_1_Months	risk_trend_factor	risk_per_share	volume_factor
A	2022-06-17	147.679993	179.570007	179.570007	-9.088903	18.559998	1.131711
AA	2022-06-17	44.419998	98.089996	98.089996	-3.704472	25.040001	0.98632
AAL	2022-06-17	22.549999	22.549999	22.549999	-3.126898	9.219999	0.707794
AAN	2022-06-17	NaN	35.439999	35.439999	NaN	6.969999	NaN
AAON	2022-06-17	81.25	83.790001	83.790001	-10.22921	9.380001	1.041044
...
ZIMV	2022-06-17	NaN	NaN	NaN	NaN	7.92	NaN
ZION	2022-06-17	60.650002	75.440002	75.440002	-4.600841	11.900002	0.978199
ZTS	2022-06-17	187.320007	249.270004	249.270004	-6.71488	31.180008	1.095466
ZUMZ	2022-06-17	50.060001	55.099998	55.099998	-5.921479	12.989998	1.674903
ZYXI	2022-06-17	16.263636	16.263636	16.263636	-10.695845	2.43	0.673641

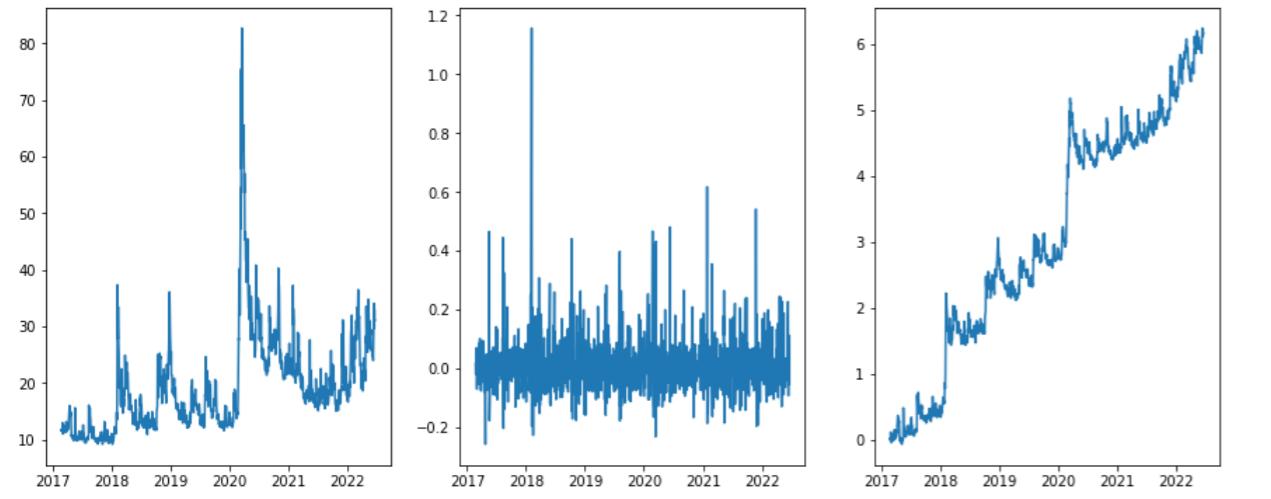
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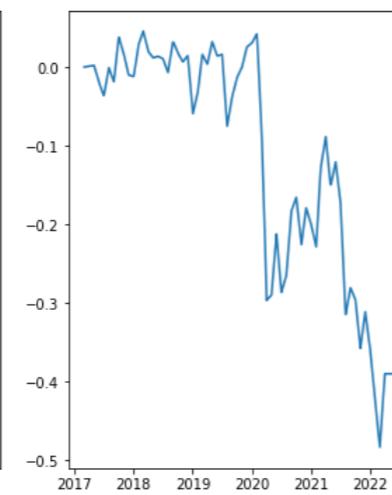
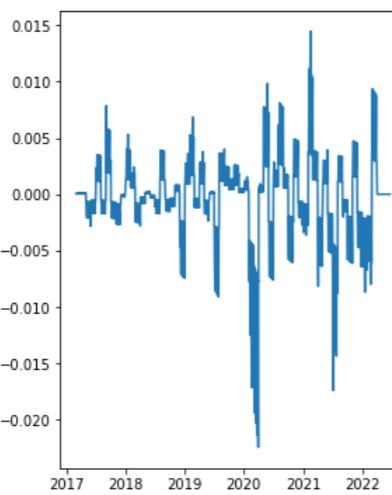
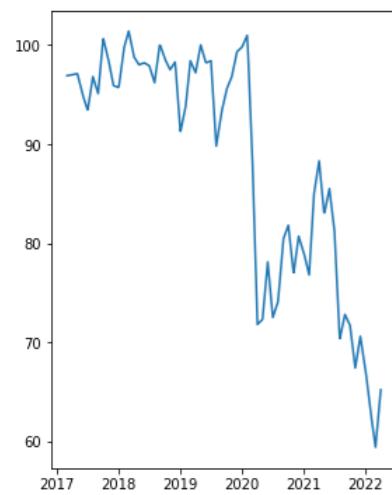
Symbol	MIN_Lookback_One_Year	MIN_Lookback_2_Months	MIN_Lookback_1_Months	risk_trend_factor	risk_per_share	volume_factor	index	sector	sector_risk_trend_factor	index	Sector
ACC	49.209999	65.019997	65.019997	10.926848	1.23	2.134689	VNQ	MDYG	-3.05337	SP400	Real Estate
MTOR	32.93	36.279999	36.279999	5.065223	0.459999	1.664475	error	SLY	error	SP600	error
TVTY	27.870001	32.889999	32.889999	2.341879	1.170002	1.643789	VHT	SLY	-3.323632	SP600	Healthcare
BANF	77.379997	86.82	86.82	2.011991	16.68	1.135864	error	SLY	error	SP600	error
Y	737.890015	862.869995	862.869995	1.771776	15.72998	1.56538	VFH	MDYG	-4.617891	SP400	Financial Services
SAFM	177.479996	200.0	200.0	1.751569	27.089996	1.334104	VDC	MDYG	-2.28397	SP400	Consumer Defensive
SJI	29.24	35.32	35.32	1.295238	2.100002	0.791297	error	SLY	error	SP600	error
LNTH	25.790001	64.139999	69.738998	1.178774	19.079998	1.823238	VHT	SLY	-3.323632	SP600	Healthcare
ROG	206.130005	274.51001	274.51001	1.068804	21.51001	0.980653	error	SLY	error	SP600	error
TWI	11.82	15.77	18.889999	0.931088	6.53	1.389288	VIS	SLY	-4.514668	SP600	Industrials
PBF	18.780001	30.129999	32.41	0.887657	19.849998	0.835417	VDE	SLY	-0.123306	SP600	Energy
GO	36.77	36.77	37.82	0.842135	10.793999	1.191531	VDC	MDYG	-2.28397	SP400	Consumer Defensive
HRB	26.23	28.17	34.959999	0.731411	13.180002	0.963511	VCR	MDYG	-4.721407	SP400	Consumer Cyclical
AZPN	162.559998	169.220001	191.460007	0.719312	61.670013	0.677612	VGT	MDYG	-4.954472	SP400	Technology
CEIX	18.93	50.389999	55.259998	0.677246	20.48	1.548727	VDE	SLY	-0.123306	SP600	Energy
PSB	165.850006	189.229996	189.830002	0.57675	22.279999	2.540601	VNQ	MDYG	-3.05337	SP400	Real Estate
MCK	204.660004	333.440002	339.940002	0.573819	41.25	1.048139	VHT	SPY	-3.323632	SP500	Healthcare
GCP	27.780001	32.279999	32.279999	0.502796	0.895	1.87078	error	SLY	error	SP600	error
WRB	54.953335	71.269997	71.529999	0.374885	7.220001	1.220256	VFH	SPY	-4.617891	SP500	Financial Services
FCN	147.380005	167.279999	170.649994	0.359043	18.800003	0.694756	error	MDYG	error	SP400	error
XOM	64.800003	91.510002	92.919998	0.347413	26.279999	1.153813	VDE	SPY	-0.123306	SP500	Energy
MANT	92.0	92.0	94.730003	0.320637	17.590004	2.782348	VGT	SLY	-4.954472	SP600	Technology
SM	24.780001	43.689999	43.689999	0.305033	22.850002	0.640686	VDE	SLY	-0.123306	SP600	Energy
DINO	39.389999	40.950001	48.290001	0.269915	23.599998	1.094012	VDE	MDYG	-0.123306	SP400	Energy
PLAB	14.56	20.299999	20.299999	0.264129	8.670001	2.163783	VGT	SLY	-4.954472	SP600	Technology
MPC	64.839996	91.879997	98.290001	0.209274	32.779999	1.221452	VDE	SPY	-0.123306	SP500	Energy
LLY	235.850006	314.0	314.0	0.187301	47.25	0.967658	VHT	SPY	-3.323632	SP500	Healthcare
VLO	84.949997	111.519997	131.690002	0.182835	50.099998	1.3872	VDE	SPY	-0.123306	SP500	Energy
APA	24.299999	45.220001	45.27	0.181301	15.830002	0.999608	VDE	SPY	-0.123306	SP500	Energy
PPC	26.280001	29.700001	30.559999	0.177885	8.32	1.275425	VDC	MDYG	-2.28397	SP400	Consumer Defensive
MRO	14.16	27.719999	29.0	0.151107	10.390001	1.000459	VDE	SPY	-0.123306	SP500	Energy
DVN	31.99	64.980003	73.18	0.148782	26.280003	1.104104	VDE	SPY	-0.123306	SP500	Energy
UTHR	212.619995	218.380005	218.380005	0.139402	62.839996	1.481235	VHT	MDYG	-3.323632	SP400	Healthcare
VIVO	27.450001	28.719999	28.719999	0.109712	5.559999	0.591657	VHT	SLY	-3.323632	SP600	Healthcare
ROCC	25.59	42.66	42.66	0.108216	23.564001	1.213679	VDE	SLY	-0.123306	SP600	Energy
COP	61.779999	107.519997	108.300003	0.10252	35.310005	0.95084	VDE	SPY	-0.123306	SP500	Energy
OXY	32.52	63.240002	69.169998	0.093736	22.510002	1.190976	VDE	SPY	-0.123306	SP500	Energy
MGPI	76.68	97.610001	104.0	0.074244	15.220001	1.204144	error	SLY	error	SP600	error
MTDR	34.91	59.119999	59.27	0.012469	24.059998	0.702256	VDE	MDYG	-0.123306	SP400	Energy
CIVI	50.98	66.419998	67.610001	-0.161203	29.590004	1.757641	VDE	SLY	-0.123306	SP600	Energy
AZO	1542.300049	2267.22998	2267.399902	-0.188687	526.160034	1.078463	VCR	SPY	-4.721407	SP500	Consumer Cyclical
MUSA	159.0	249.110001	262.579987	-0.239876	45.189987	1.334565	VCR	MDYG	-4.721407	SP400	Consumer Cyclical
UFCS	32.93	32.93	32.93	-0.241611	4.470001	1.187165	error	SLY	error	SP600	error
CVBF	24.370001	24.370001	24.370001	-0.307694	2.34	1.598852	VFH	SLY	-4.617891	SP600	Financial Services
EOG	87.989998	127.949997	132.350006	-0.308981	42.980003	0.966433	VDE	SPY	-0.123306	SP500	Energy
CYTK	30.139999	47.900002	47.900002	-0.373333	11.25	0.618546	VHT	SLY	-3.323632	SP600	Healthcare
ULTA	351.720001	437.220001	438.630005	-0.406162	98.680023	1.308411	VCR	SPY	-4.721407	SP500	Consumer Cyclical

Symbol	MIN_Lookback_One_Year	MIN_Lookback_2_Months	MIN_Lookback_1_Months	risk_trend_factor	risk_per_share	volume_factor	index	sector	sector_risk_trend_factor	index	Sector
EQT	23.24	45.5	45.5	-0.406587	15.790001	1.286201	VDE	MDYG	-0.123306	SP400	Energy
PTEN	10.99	18.719999	18.77	-0.410714	6.72	1.071603	VDE	SLY	-0.123306	SP600	Energy
LPI	75.059998	99.260002	99.260002	-0.436873	66.77	1.480449	VDE	SLY	-0.123306	SP600	Energy
NTCT	31.91	34.869999	35.349998	-0.451351	7.4	1.227115	VGT	SLY	-4.954472	SP600	Technology
BMY	67.959999	78.129997	78.470001	-0.471015	6.900002	1.240092	VHT	SPY	-3.323632	SP500	Healthcare
PSX	94.339996	94.339996	98.660004	-0.476348	33.190002	1.286747	VDE	SPY	-0.123306	SP500	Energy
NOC	379.029999	490.820007	490.820007	-0.478305	60.379974	0.996341	VIS	SPY	-4.514668	SP500	Industrials
SNEX	70.470001	77.5	77.5	-0.482537	14.030006	1.141643	VFH	SLY	-4.617891	SP600	Financial Services
TALO	18.24	20.6	21.370001	-0.496599	8.82	1.661246	VDE	SLY	-0.123306	SP600	Energy
FANG	92.309998	147.990005	147.990005	-0.501874	42.680008	1.13222	VDE	SPY	-0.123306	SP500	Energy
CVX	113.110001	174.759995	175.649994	-0.502048	36.610001	1.062215	VDE	SPY	-0.123306	SP500	Energy
CTRA	20.33	31.42	33.0	-0.506416	10.129999	1.576163	VDE	SPY	-0.123306	SP500	Energy
DLTR	120.370003	177.149994	177.190002	-0.509804	47.939995	1.139688	VDC	SPY	-2.28397	SP500	Consumer Defensive
EXLS	108.07	153.139999	154.979996	-0.516764	25.949997	1.162846	error	SLY	error	SP600	error
PDCE	49.919998	79.389999	79.389999	-0.539647	26.610001	1.314132	VDE	MDYG	-0.123306	SP400	Energy
SAFT	87.980003	93.18	93.18	-0.545302	11.920006	1.224409	VFH	SLY	-4.617891	SP600	Financial Services
RRC	16.32	34.610001	34.610001	-0.564298	11.819998	0.930726	VDE	MDYG	-0.123306	SP400	Energy
HES	90.970001	117.059998	119.43	-0.576982	32.670006	1.067832	VDE	SPY	-0.123306	SP500	Energy
VRTX	234.580002	292.75	292.75	-0.630965	48.830002	0.879467	VHT	SPY	-3.323632	SP500	Healthcare
HALO	46.619999	46.619999	46.619999	-0.639725	11.630001	0.928279	VHT	MDYG	-3.323632	SP400	Healthcare
CSL	197.210007	260.690002	275.130005	-0.659255	44.520004	0.893561	error	MDYG	error	SP400	error
NFG	55.220001	74.32	74.32	-0.690476	10.919998	1.09896	VDE	MDYG	-0.123306	SP400	Energy
CAL	28.34	29.360001	29.360001	-0.694553	10.280001	1.602114	VCR	SLY	-4.721407	SP600	Consumer Cyclical
UNM	31.98	34.029999	36.73	-0.695054	7.280003	0.872299	VFH	MDYG	-4.617891	SP400	Financial Services
HSY	175.550003	231.0	231.600006	-0.706836	28.380005	1.169855	VDC	SPY	-2.28397	SP500	Consumer Defensive
GFF	29.190001	29.42	31.700001	-0.713654	15.820002	1.243283	VIS	SPY	-4.514668	SP600	Industrials
PXD	175.369995	260.0	279.980011	-0.727749	68.759995	1.317982	VDE	SPY	-0.123306	SP500	Energy

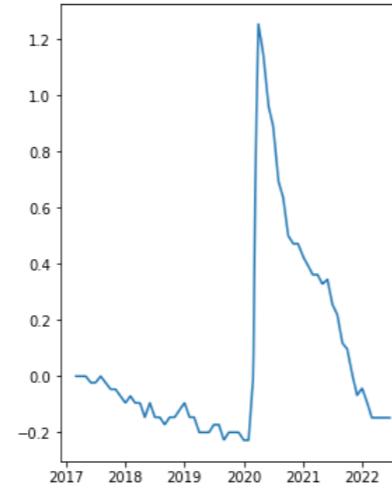
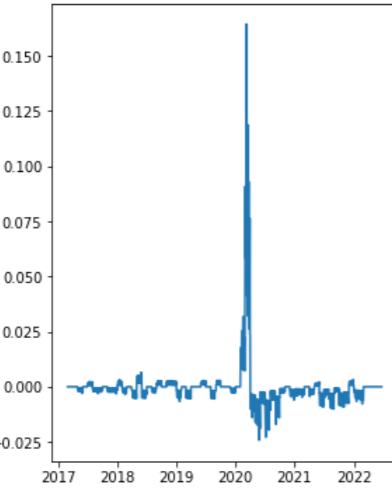
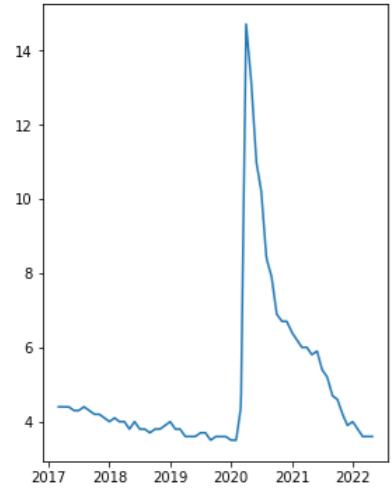
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Market volatility



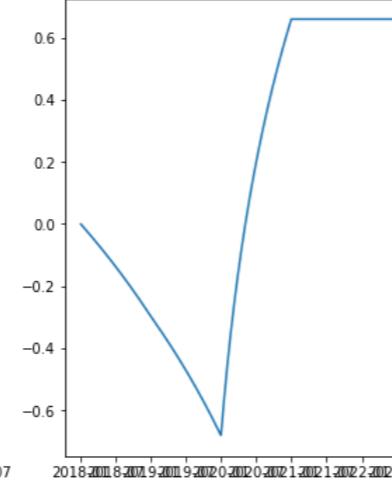
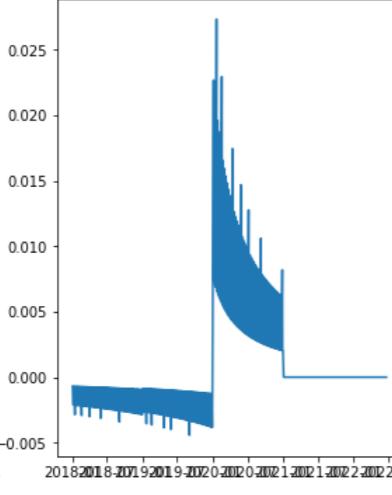
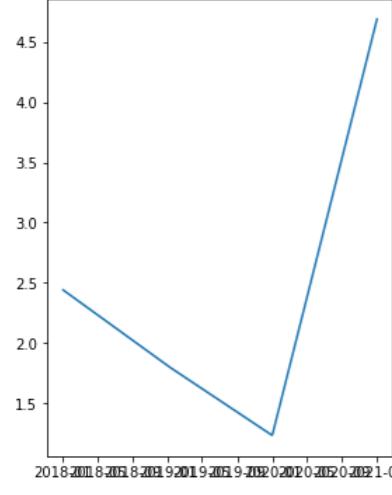
Consumer Confidence



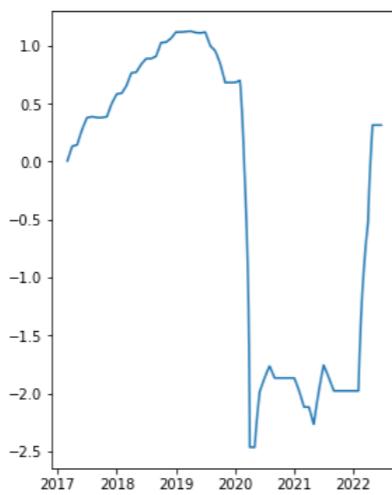
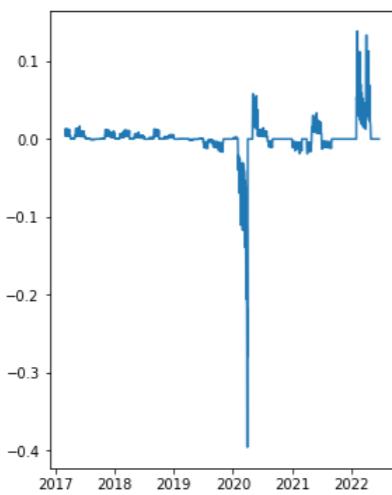
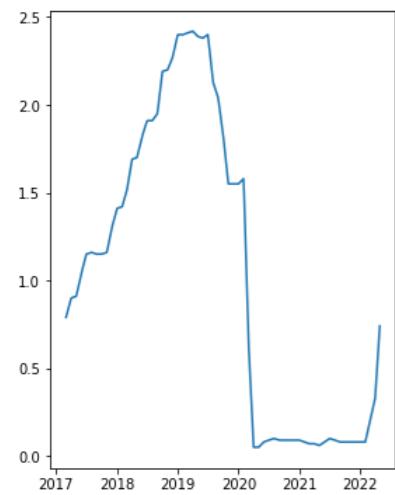
Unemployment



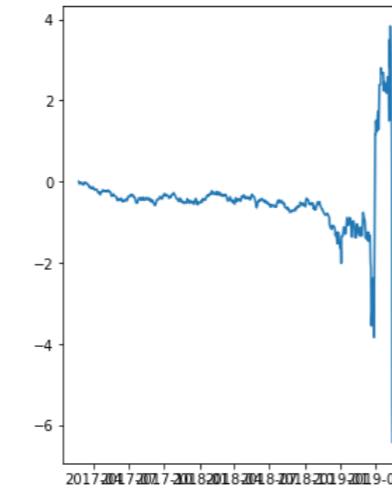
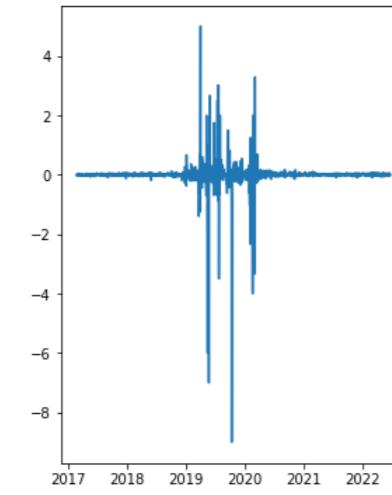
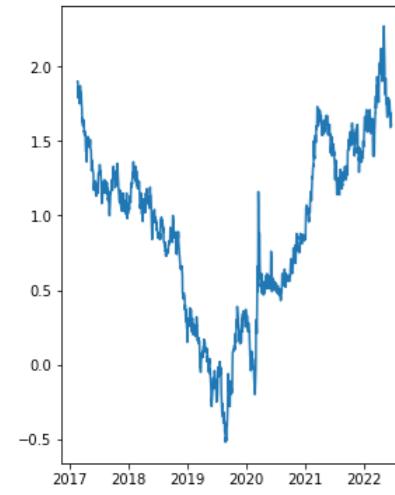
Inflation



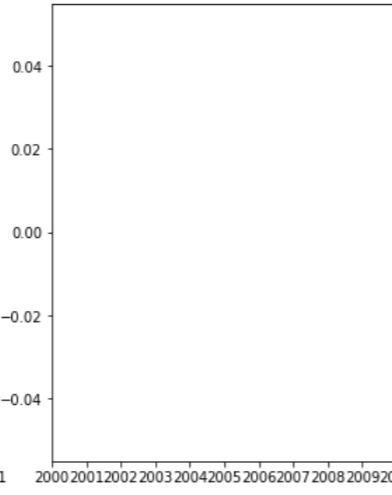
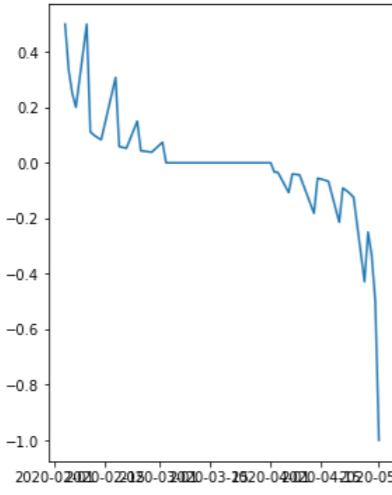
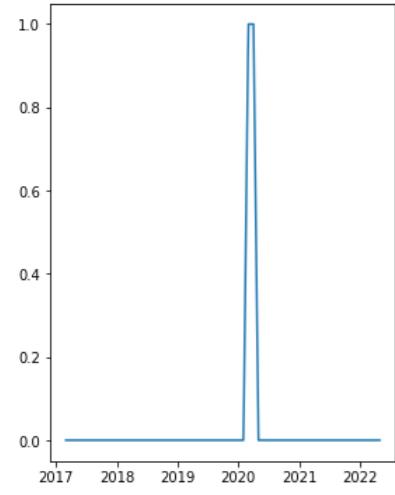
Interest Rates



10 Year to 3 Month



Recession Indicator



```

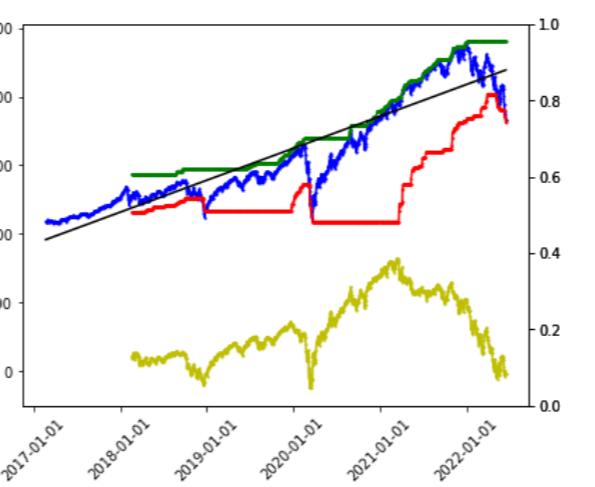
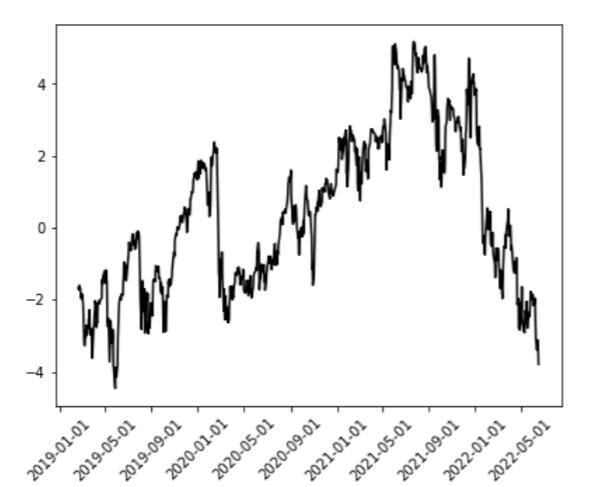
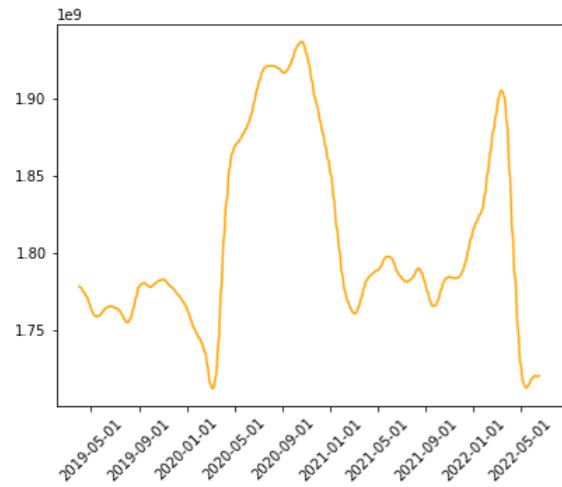
adf < .05 or .01, mean reverting
Hurst
> .5 - The time series is mean reverting.
= .5 - The time series is a Geometric Brownian Motion.
< .5 - The time series is trending.
symbol: SPY
sector: error
sector: error
Index: SP500
vol_30d_2yr: 1719938470.5078125
Sector 1YMF: -287.8400573730469
1YMF: -287.8400573730469
risk trend factor: -3.791860877423899
    totalAssets trailingPE
SPY 3.781762e+11 3.915463

```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSD	90d_lower	90d_upper
2022-06-17	365.859985	364.518828	396.470318	428.421808	419.420001	25.514981	368.390039	470.449963

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
SPY	1.183517	365.859985	1719938470.507812	0.369677	0.658465	0.422658

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		



ets next 13 weeks

2022-06-17

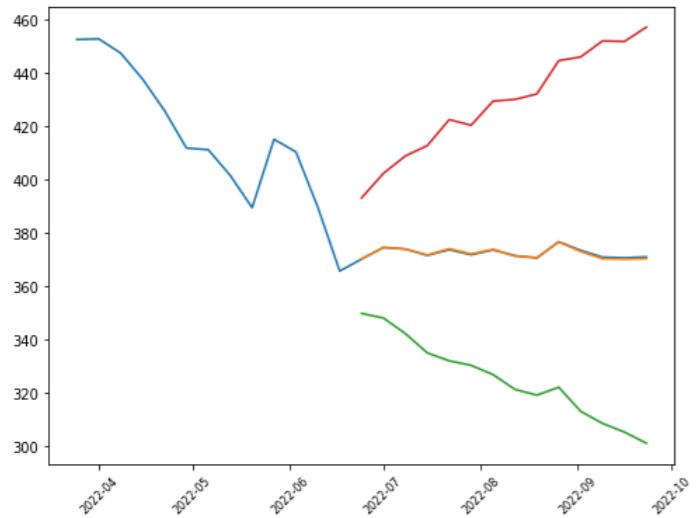
2022-06-28

inner cv scores:

```

best model: ['add', 'mul', True]
best inner cv score, sdev (11 folds): 1596.0716781966541 2394.5624623333656
test cv mean error, stdev (10 folds): 1700.9872462466215 2487.2162000395974
sell date: 2022-08-26
expected return: 0.03006030216943287
discounted return: 0.0004488483738653848
quarter return: 1.0421488524669174

```

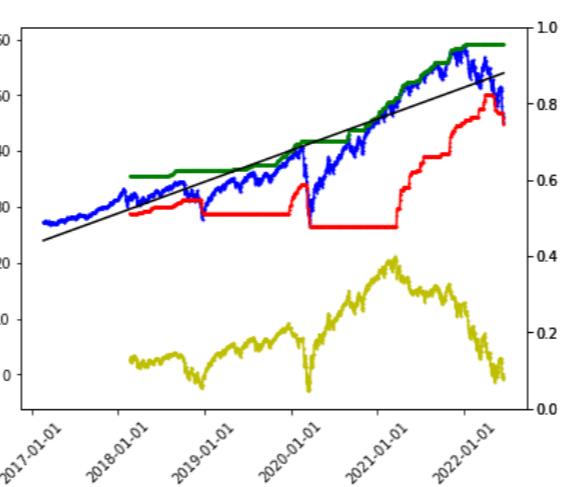
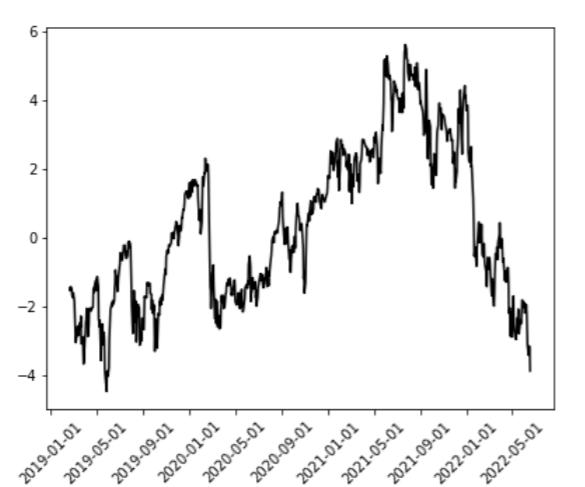
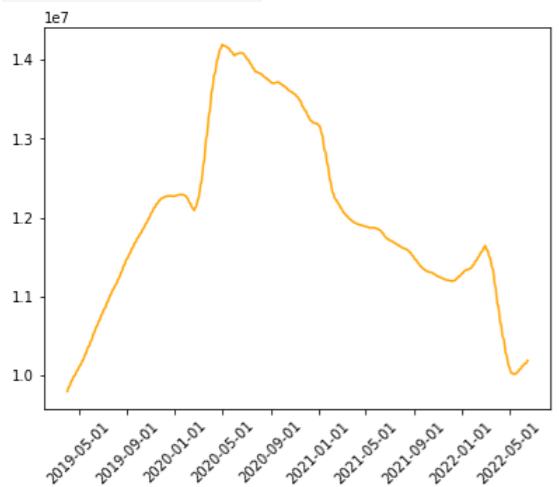


```
['options', ('2022-06-30', '2022-09-16', '2022-09-30', '2022-12-16', '2023-01-20', '2023-03-17', '2023-06-16', '2023-12-15', '2024-01-19', '2024-12-20')]
symbol: SPTM
sector: error
sector: error
Index: SP1500
vol_30d_2yr: 10189559.1796875
Sector 1YMF: -34.95000076293945
1YMF: -34.95000076293945
risk trend factor: -3.8790224724143685
Empty DataFrame
Columns: []
Index: [SPTM]
```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	45.310001	44.984943	48.919841	52.854739	51.683968	3.088065	45.507837	57.860099

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
SPTM	1.653055	45.310001	10189559.179688	0.388272	0.658826	0.429487

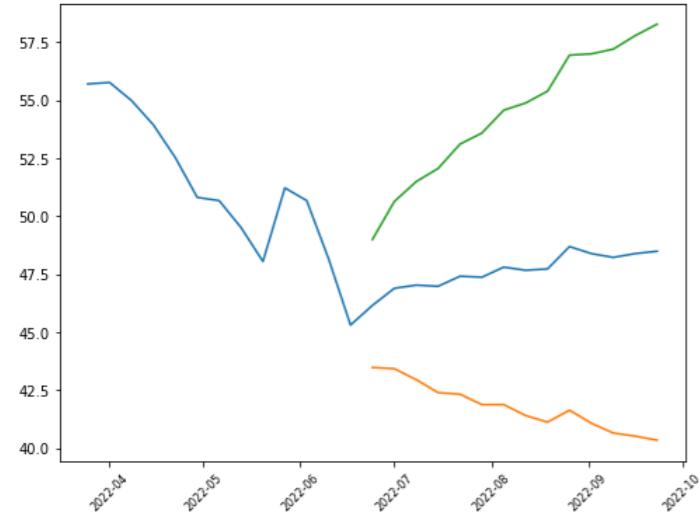
	l axis	r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'add', False]
best inner cv score, sdev (11 folds): 26.394416339138864 42.330559554706326
test cv mean error, stdev (10 folds): 28.190469214689465 43.99527833378243
sell date: 2022-08-26
expected return: 0.07465838940675362
discounted return: 0.00109154733162109
quarter return: 1.105577238641557

```



```

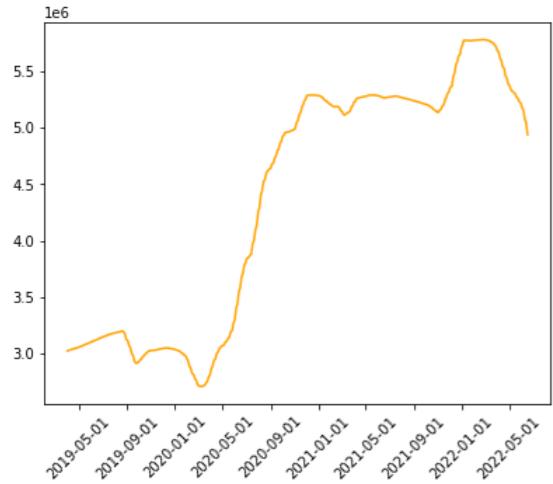
symbol: MDYG
sector: error
sector: error
Index: SP400
Index: SP400
vol_30d_2yr: 4938966.40625
Sector 1YMF: -69.05999755859375
1YMF: -69.05999755859375
risk trend factor: -5.134573474205833
totalAssets
MDYG 1.506270e+09

```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	59.93	59.511554	65.413016	71.314478	69.046349	4.323319	60.399712	77.692987

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
MDYG	0.576598	59.93	4938966.40625	0.256027	0.494117	0.451147

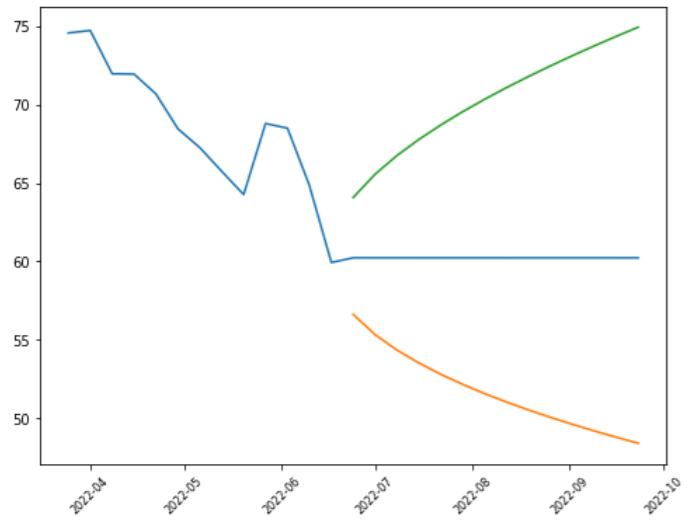
	l axis	r axis	legend	legend
blue	symbol	magenta	sector	
green	trailing_1yr_max	cyan	index	
red	trailing_1yr_min			
orange	30d_vol_2yr			
black	risk_trend_factor/linear			
yellow	supply_trend_1yr			



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, 'add', True]
best inner cv score, sdev (11 folds): 85.2363974147996 165.19312912990566
test cv mean error, stdev (10 folds): 92.56630196775387 171.54196143116857
sell date: 2022-06-24
expected return: 0.004979507189050403
discounted return: 0.0016570882713884405
quarter return: 1.164539752845886

```



```

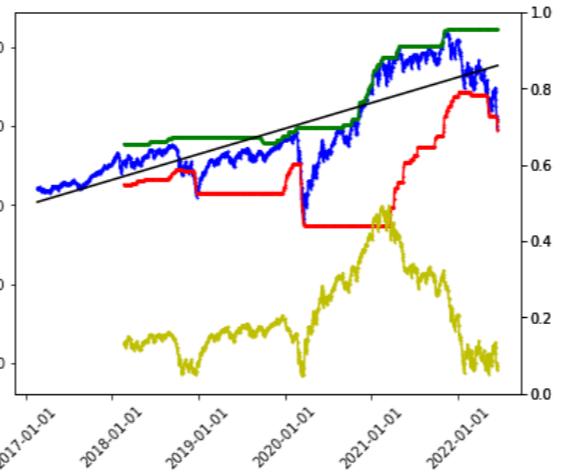
symbol: SLY
sector: error
sector: error
Index: SP600
Index: SP600
vol_30d_2yr: 1808137.109375
Sector 1YMF: -77.27001953125
1YMF: -77.27001953125
risk trend factor: -5.242200185196592
Empty Dataframe
Columns: []
Index: [SLY]

```

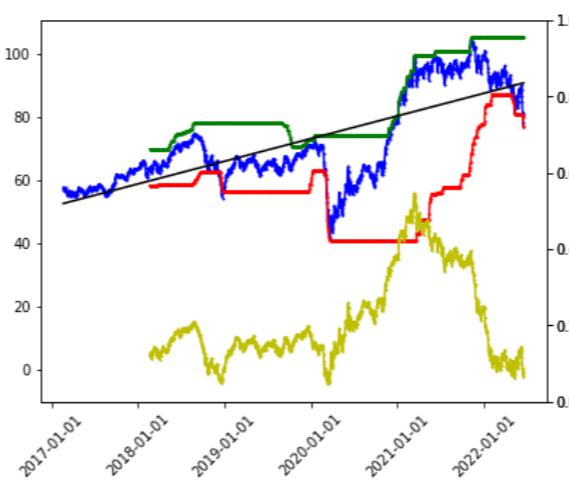
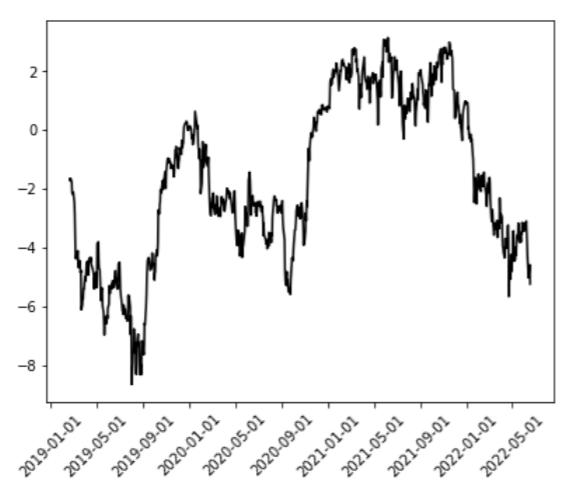
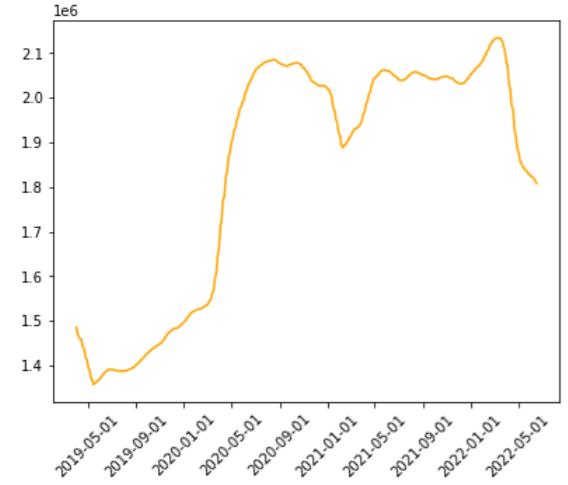
	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	78.089996	78.068302	85.071269	92.074236	88.226349	4.474948	79.276452	97.176246

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
SLY	1.23276	78.089996	1808137.109375	0.449524	0.532018	0.51304

AnalyzeSP1500-Backup



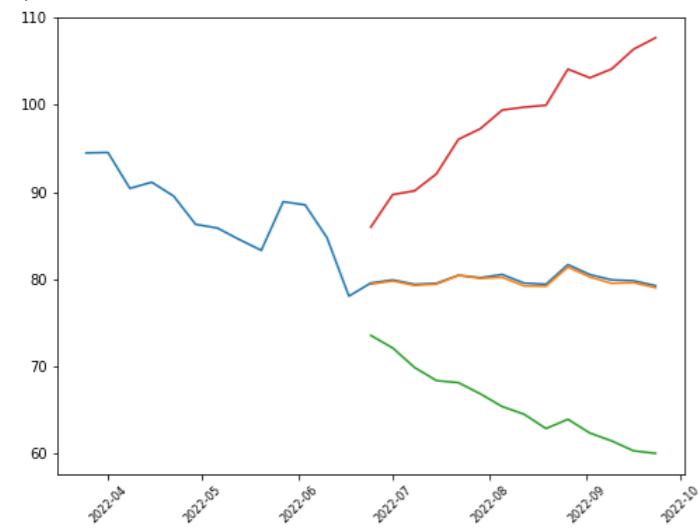
l axis		r axis	
legend	symbol	legend	sector
blue	trailing_1yr_max	magenta	sector
green	trailing_1yr_min	cyan	index
red	30d_vol_2yr		
orange	risk_trend_factor/linear		
black	supply_trend_1yr		



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'mul', True]
best inner cv score, sdev (11 folds): 128.19891433286836 187.56519270552653
test cv mean error, stdev (10 folds): 137.65292970980926 194.20507087940797
sell date: 2022-08-26
expected return: 0.046275734526300405
discounted return: 0.0006856431191577528
quarter return: 1.0650881353598132

```



```

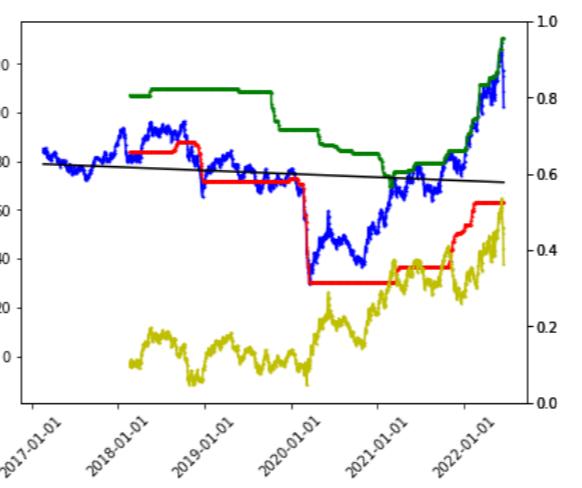
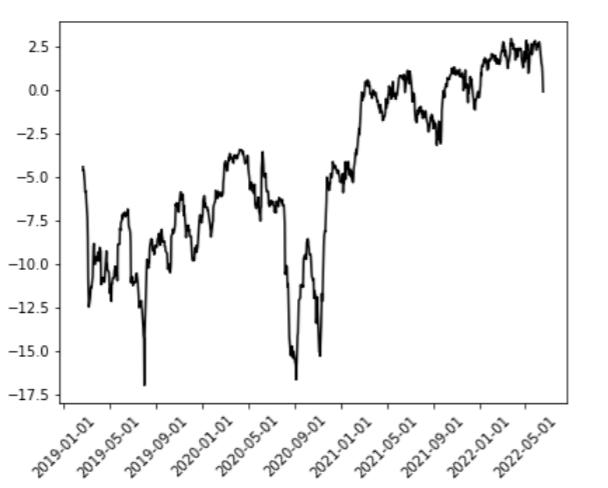
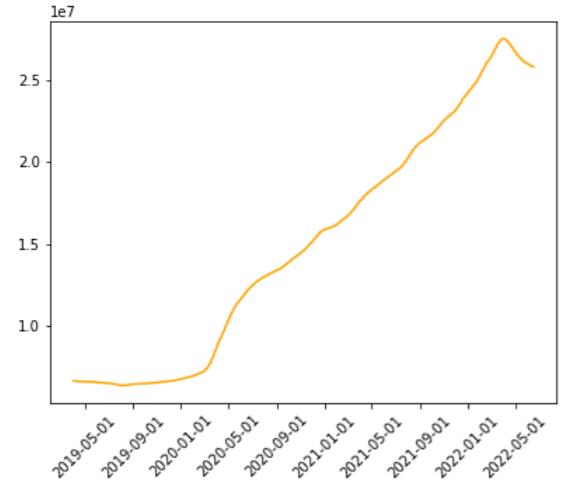
symbol: VDE
sector: error
sector: Energy
Index: nan
vol_30d_2yr: 25785341.015625
Sector 1YMF: -3.82000732421875
1YMF: -3.82000732421875
risk trend factor: -0.12330558135216596
    totalAssets   trailingPE
VDE  1.106882e+10     8.922911

```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	102.349998	106.909959	119.43381	131.957661	112.539048	6.727104	99.08484	125.993256

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst	
VDE	0.896641	102.349998	25785341.015625	0.70127	0.621023	0.512979

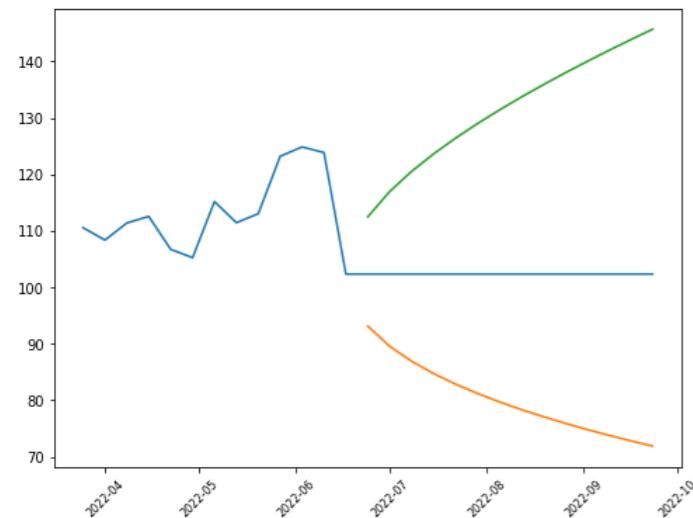
l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, None]
best inner cv score, sdev (11 folds): 193.76777233973687 221.58393285871566
test cv mean error, stdev (10 folds): 212.28898331472033 224.13387833049924
sell date: 2022-06-24
expected return: 1.90756226590671e-05
discounted return: 6.358500455716509e-06
quarter return: 1.0005851513164046

```



```

symbol: VDC
sector: error
sector: Consumer Defensive
Index: nan
vol_30d_2yr: 3264449.609375
Sector 1YMF: -74.80001831054688
1YMF: -74.80001831054688
risk trend factor: -2.283970024749523
    totalAssets
VDC 7.752956e+09

```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
--	-----------	---------	----------	---------	--------	---------	-----------	-----------

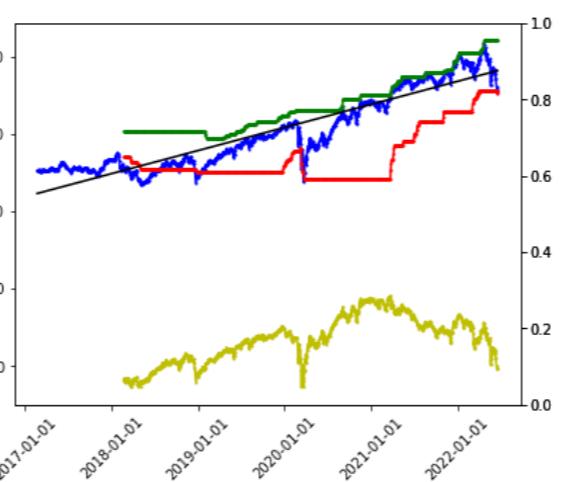
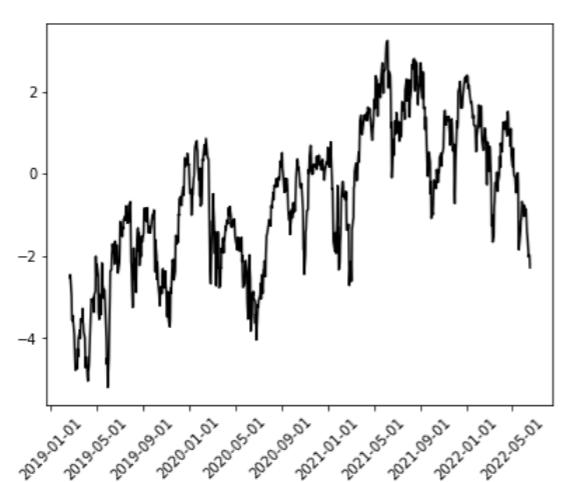
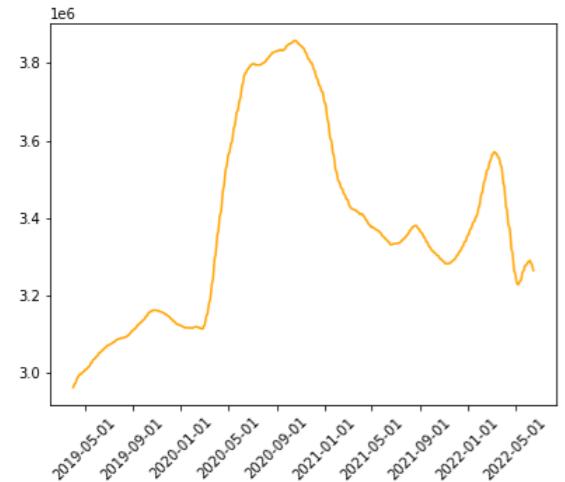
2022-06-17	177.059998	176.153403	185.845715	195.538026	194.674128	7.920194	178.833739	210.514517
------------	------------	------------	------------	------------	------------	----------	------------	------------

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
--	---------------	----------	-------------	---------	-----	-------

VDC	1.413592	177.059998	3264449.609375	0.48903	0.752482	0.355797
-----	----------	------------	----------------	---------	----------	----------

I axis r axis

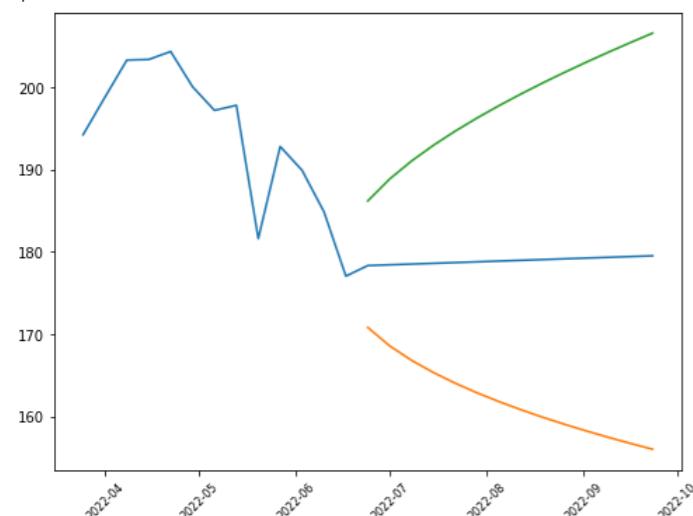
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, 'add', False]
best inner cv score, sdev (11 folds): 191.4979132949934 238.74580568254396
test cv mean error, stdev (10 folds): 195.94535056184174 249.96392540285612
sell date: 2022-09-23
expected return: 0.014002841455701815
discounted return: 0.00014794399997075658
quarter return: 1.0137028767516196

```

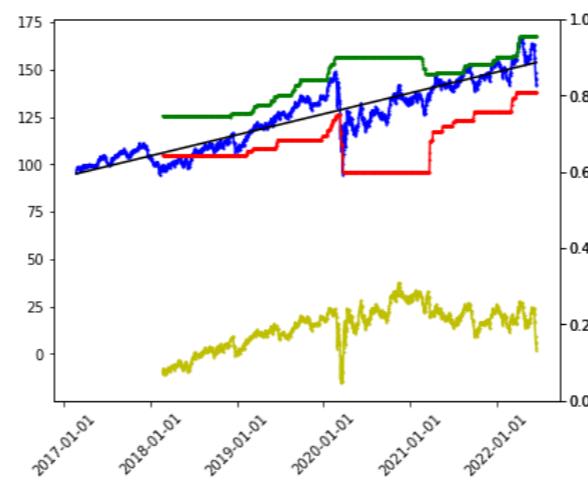
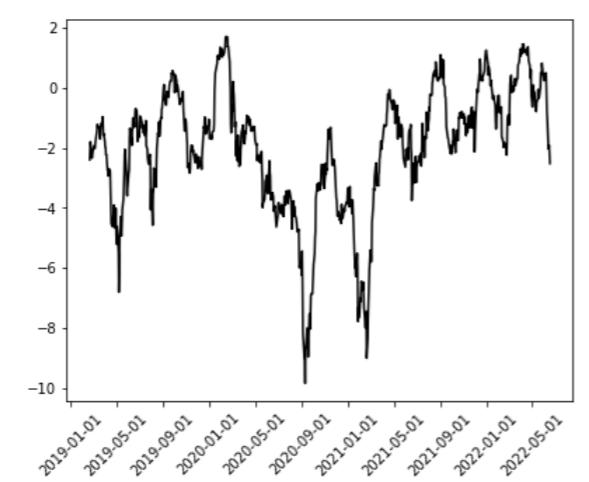
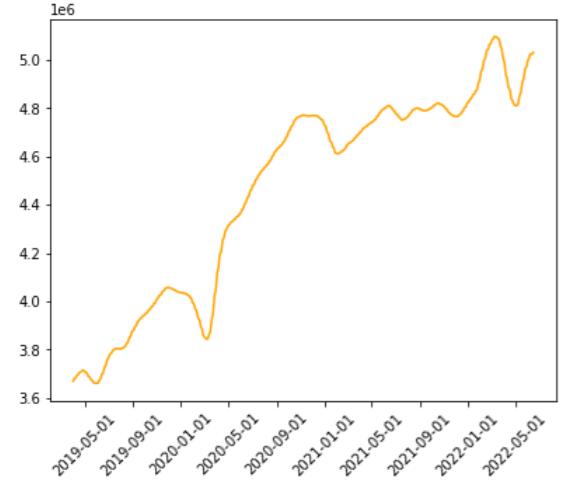


```
[ 'options', ('2022-07-15',) ]
symbol: VPU
sector: error
sector: Utilities
Index: nan
vol_30d_2yr: 5031661.71875
Sector 1YMF: -59.12998962402344
1YMF: -59.12998962402344
risk trend factor: -2.5204591944584465
    totalAssets
VPU 7.854255e+09
```

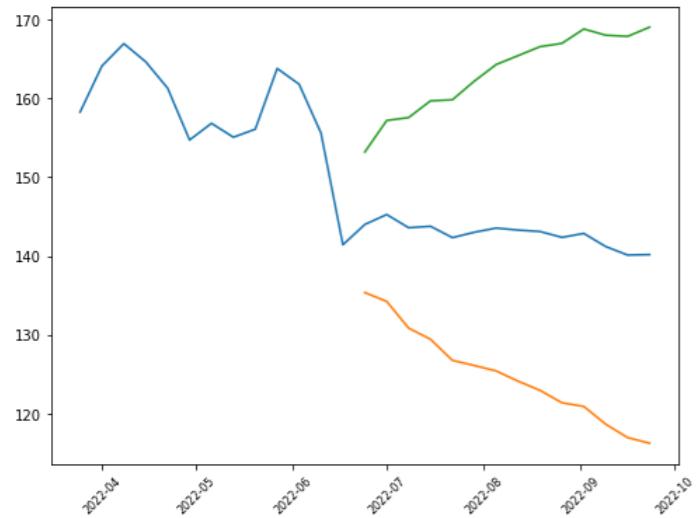
	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	141.440002	142.694749	156.469524	170.244299	158.564286	5.736683	147.09092	170.037651

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
VPU	1.250581	141.440002	5031661.71875	0.451674	0.569436	0.290073

	l axis	r axis
blue	symbol	
green	trailing_1yr_max	magenta sector
red	trailing_1yr_min	cyan index
orange	30d_vol_2yr	
black	risk_trend_factor/linear	
yellow	supply_trend_1yr	



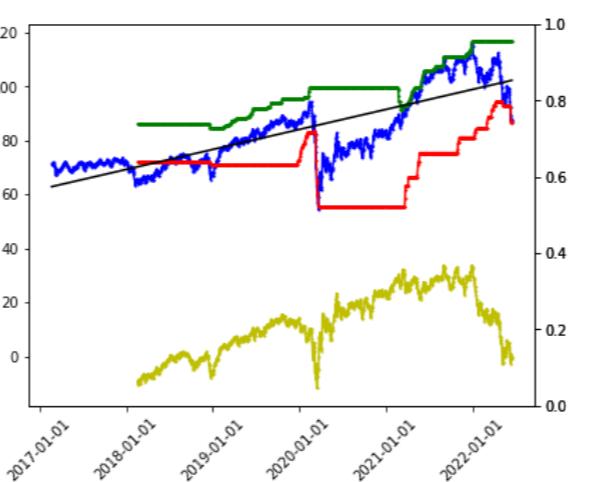
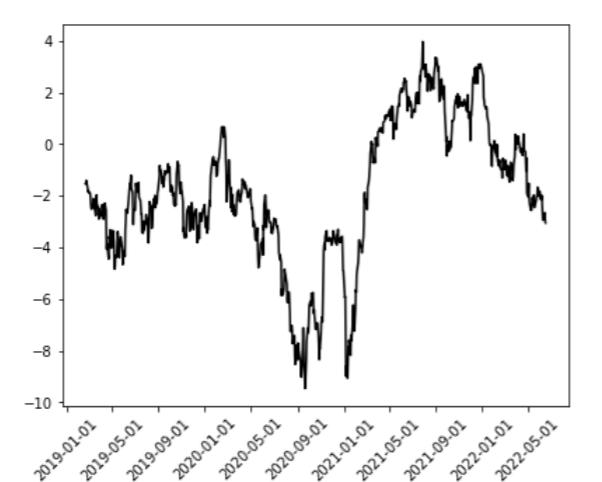
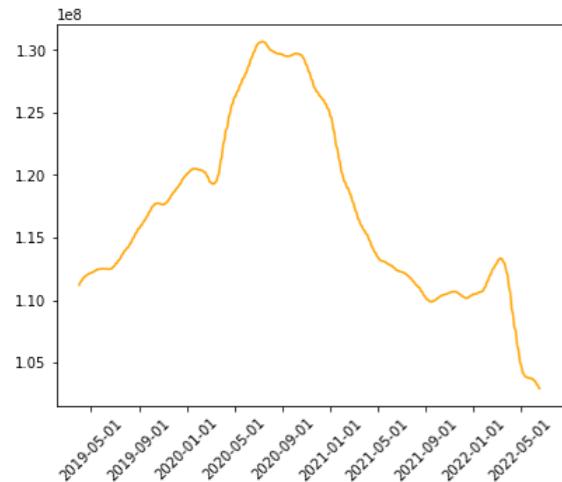
```
ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'add', True]
best inner cv score, sdev (11 folds): 259.9034878193785 631.2667191269611
test cv mean error, stdev (10 folds): 285.00332173362267 656.8252847073318
sell date: 2022-07-01
expected return: 0.027129150570113128
discounted return: 0.002680353563686788
quarter return: 1.2792355073594421
```



	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	87.699997	86.580768	94.91381	103.246851	101.788572	7.189885	87.408801	116.168343

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
VNQ	1.231534	87.699997	102932828.515625	0.296727	0.445676	0.39584

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'add', False]
best inner cv score, sdev (11 folds): 153.2875086532483 322.6295988206993
test cv mean error, stdev (10 folds): 167.13346592863107 335.2462197946879
sell date: 2022-09-02
expected return: 0.03417409183040843
discounted return: 0.00046042280116198597
quarter return: 1.0432586680960334

```



```
['options', ('2023-01-20', '2024-01-19')]
```

```
symbol: VAW
```

```
sector: error
```

```
sector: Basic Materials
```

```
Index: nan
```

```
vol_30d_2yr: 2683599.21875
```

```
Sector 1YMF: -109.739990234375
```

```
1YMF: -109.739990234375
```

```
risk trend factor: -3.165271062358118
```

```
totalAssets
```

```
VAW 5.085875e+09
```

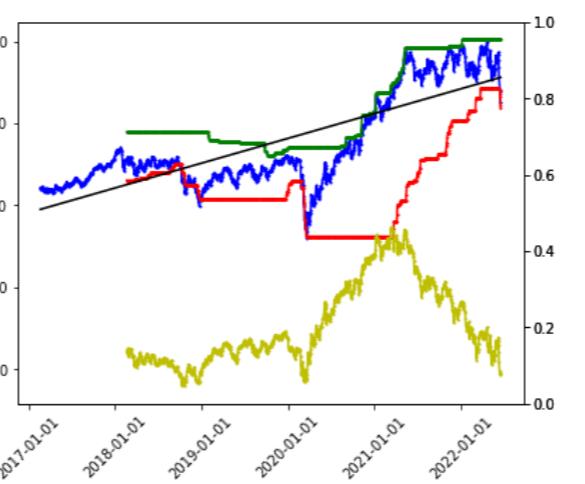
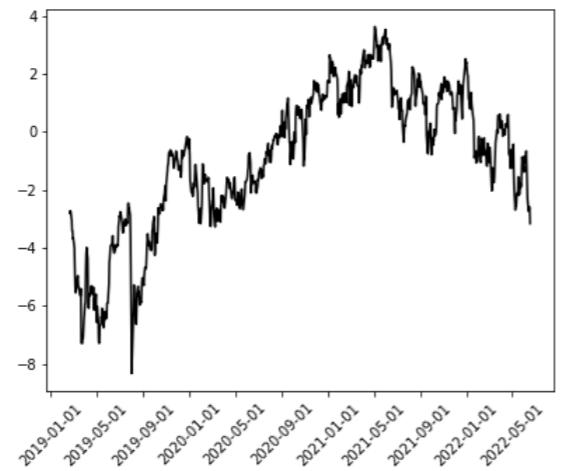
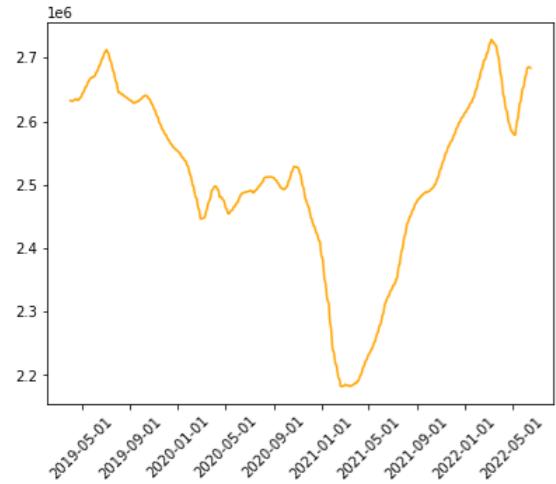
	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSD	90d_lower	90d_upper
--	-----------	---------	----------	---------	--------	-------	-----------	-----------

2022-06-17	162.800003	163.360294	181.546031	199.731768	187.277779	8.558355	170.161068	204.394489
------------	------------	------------	------------	------------	------------	----------	------------	------------

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
--	---------------	----------	-------------	---------	-----	-------

VAW	1.040096	162.800003	2683599.21875	0.553392	0.650248	0.42433
-----	----------	------------	---------------	----------	----------	---------

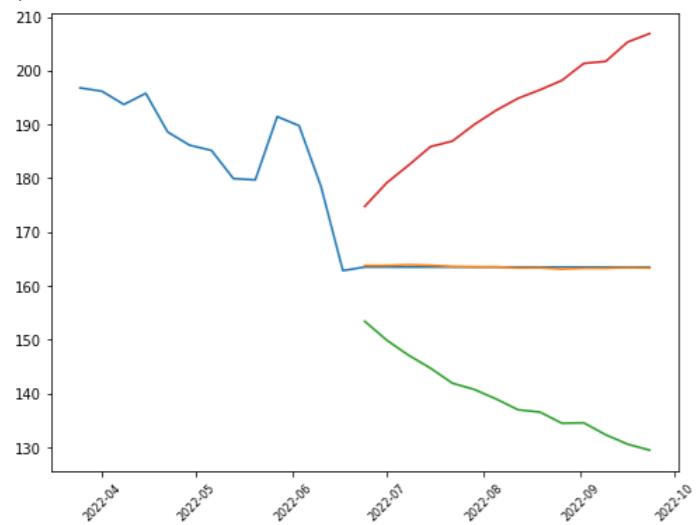
l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, 'mul', True]
best inner cv score, sdev (11 folds): 287.2375131034871 405.64150285822024
test cv mean error, stdev (10 folds): 311.0194871829152 418.0647406730486
sell date: 2022-06-24
expected return: 0.004089425305517939
discounted return: 0.0013612878230990777
quarter return: 1.1333221941307032

```



```

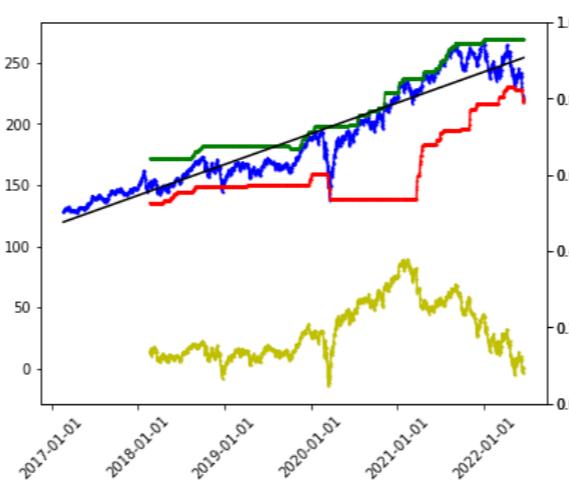
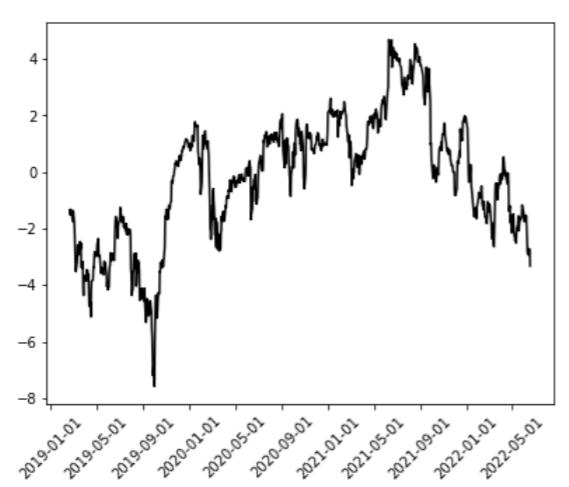
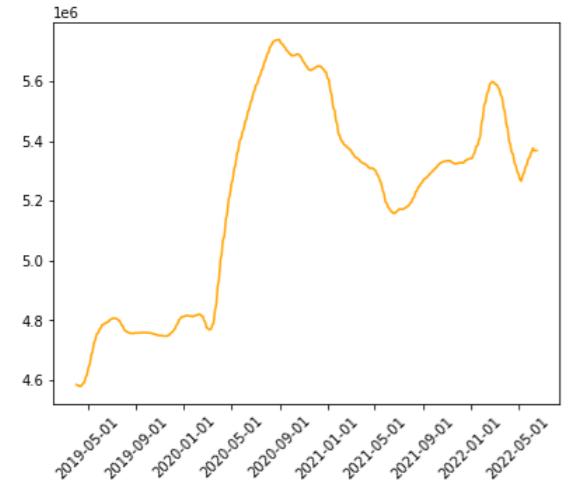
['options', ('2022-08-19',)]
symbol: VHT
sector: error
sector: Healthcare
Index: nan
vol_30d_2yr: 5367987.5
Sector 1YMF: -122.20997619628906
1YMF: -122.20997619628906
risk trend factor: -3.3236323632363236
    totalAssets trailingPE
VHT 1.866525e+10 4.871585

```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	220.210007	218.770447	234.353333	249.93622	243.78492	11.544258	220.696404	266.873435

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
VHT	1.223885	220.210007	5367987.5	0.406751	0.629182	0.332826

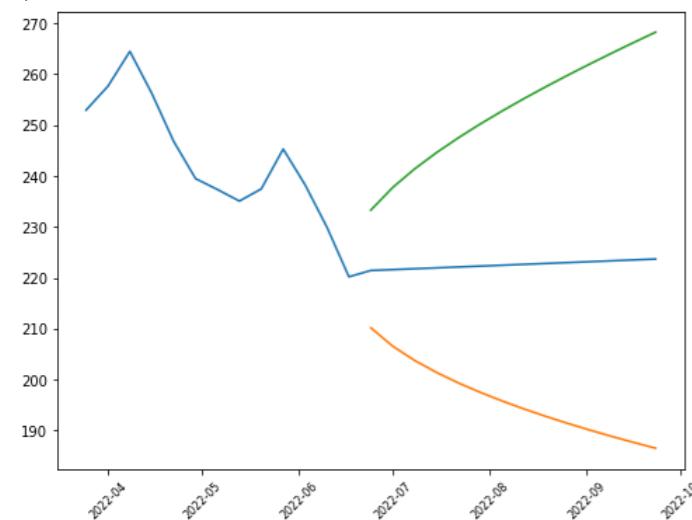
l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, 'add', False]
best inner cv score, sdev (11 folds): 387.9568267191237 524.4913701409424
test cv mean error, stdev (10 folds): 393.7137195903978 549.7597267187207
sell date: 2022-09-23
expected return: 0.01582204925193808
discounted return: 0.00016701591839241026
quarter return: 1.0154828173350399

```



```

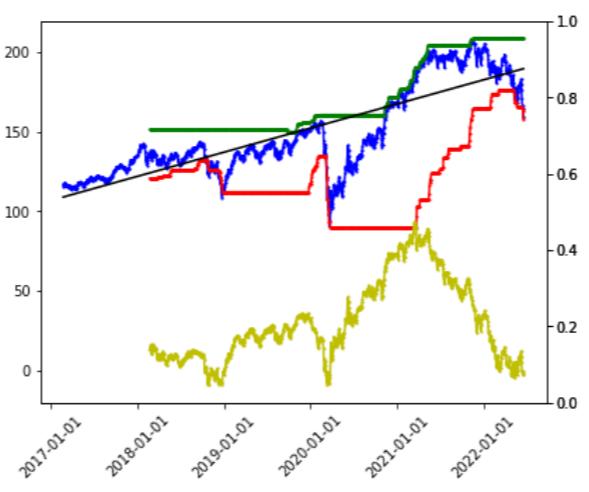
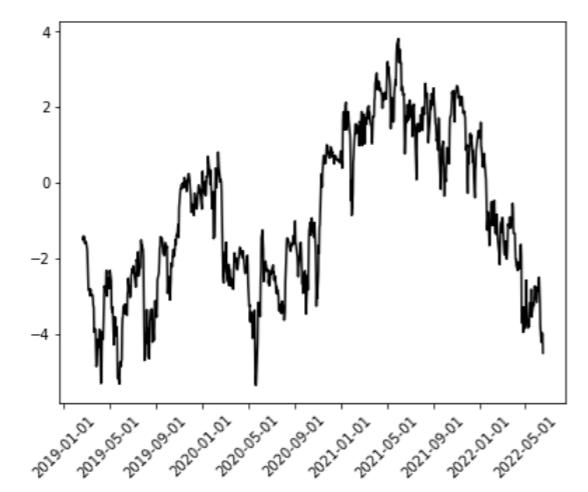
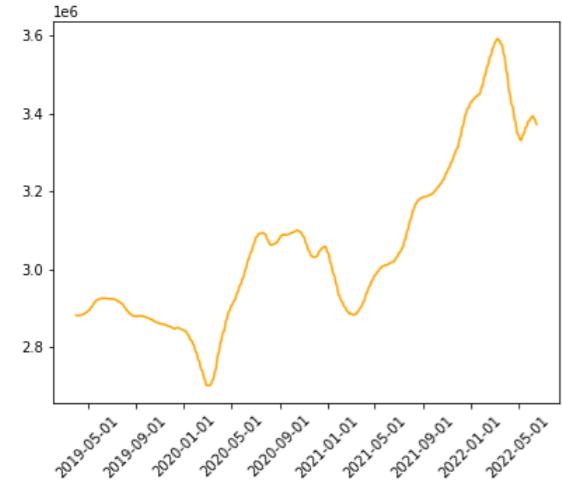
symbol: VIS
sector: error
sector: Industrials
Index: nan
vol_30d_2yr: 3372254.1015625
Sector 1YMF: -141.5800018310547
1YMF: -141.5800018310547
risk trend factor: -4.514668337867341
Empty DataFrame
Columns: []
Index: [VIS]

```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	159.809998	159.424409	172.598254	185.772099	181.362857	9.892736	161.577386	201.148329

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst	
VIS	0.869685	159.809998	3372254.101562	0.42518	0.484643	0.470479

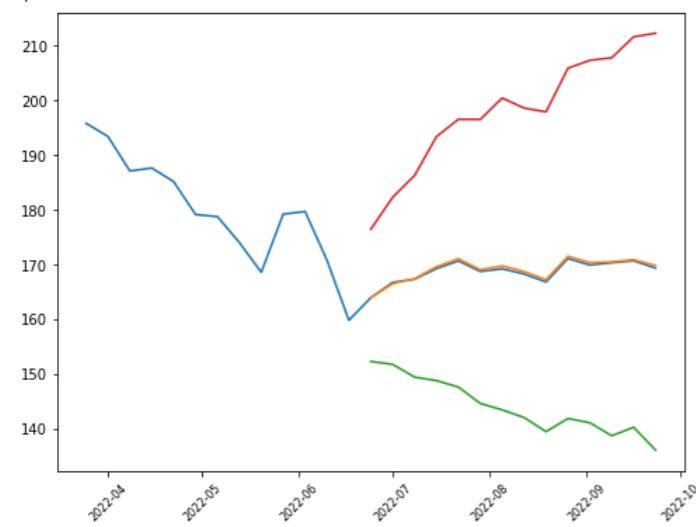
l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['mul', 'mul', False]
best inner cv score, sdev (11 folds): 486.58909352720707 806.4213614790817
test cv mean error, stdev (10 folds): 522.7693634185948 837.2262774693609
sell date: 2022-08-26
expected return: 0.07072829370193244
discounted return: 0.0010359766361507372
quarter return: 1.0999453702998094

```



```

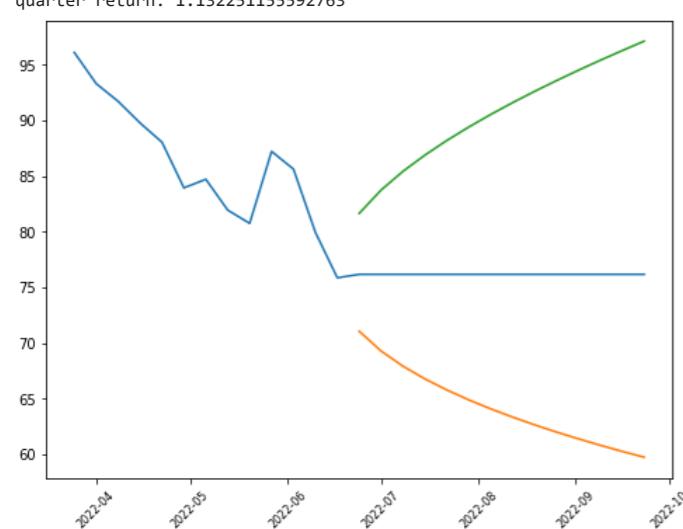
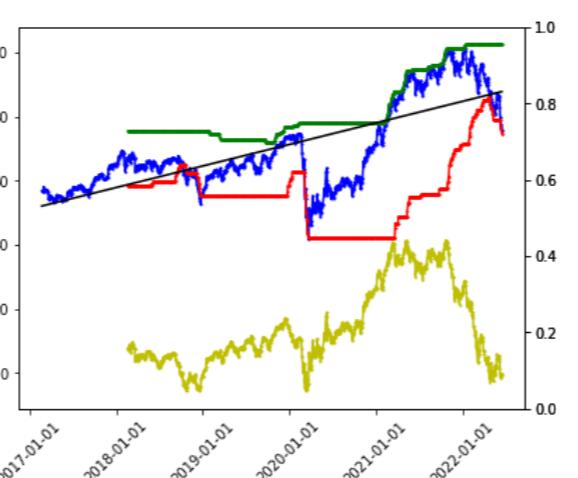
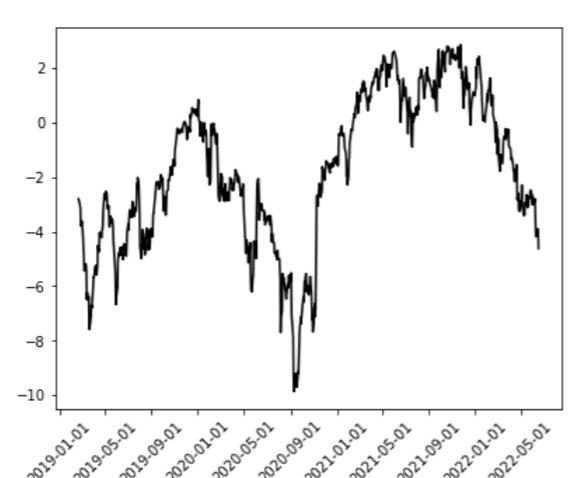
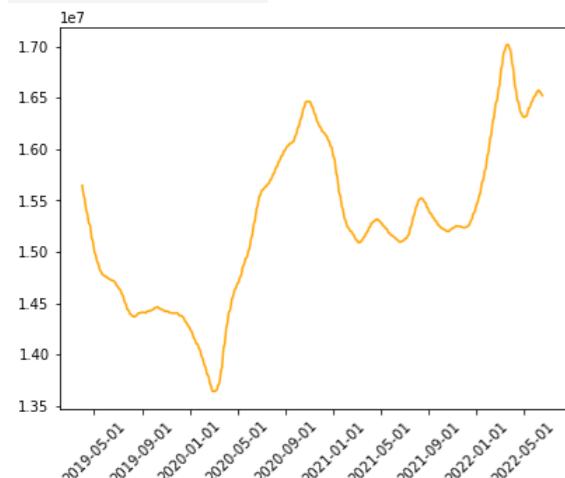
['options', ('2022-08-19',)]
symbol: VFH
sector: error
sector: Financial Services
Index: nan
vol_30d_2yr: 16520124.669375
Sector 1YMF: -72.2699966430664
1YMF: -72.2699966430664
risk trend factor: -4.617890709055871
    totalAssets
VFH 1.046217e+10

```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	75.849998	74.907534	82.472858	90.038182	86.832222	5.55532	75.721582	97.942862

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
VFH	1.270717	75.849998	16520124.609375	0.43829	0.480904	0.491635

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

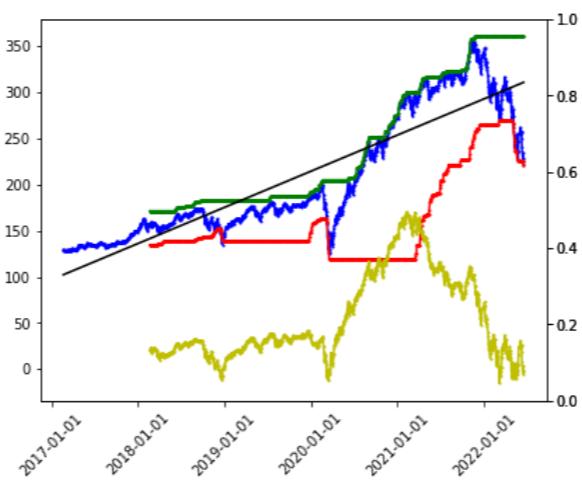
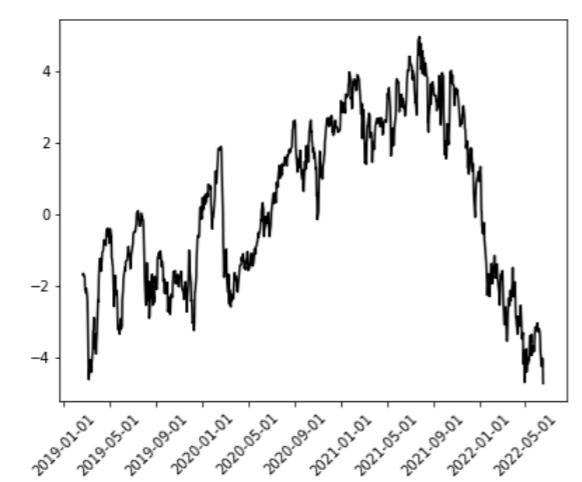
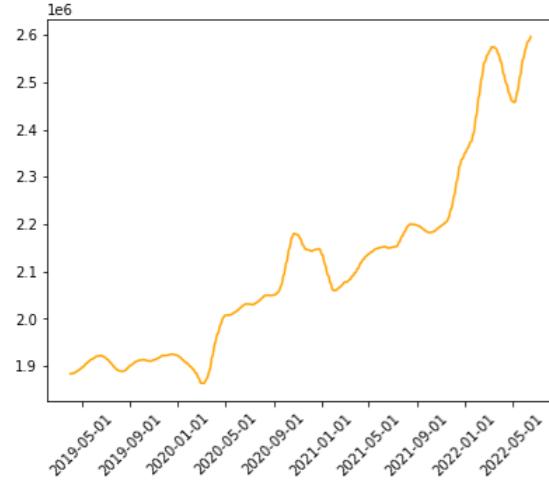


```
[ 'options', ('2022-08-19',) ]
symbol: VCR
sector: error
sector: Consumer Cyclical
Index: nan
vol_30d_2yr: 2596418.1640625
Sector 1YMF: -359.96002197265625
1YMF: -359.96002197265625
risk trend factor: -4.72140697901556
    totalAssets
VCR 5.266340e+09
```

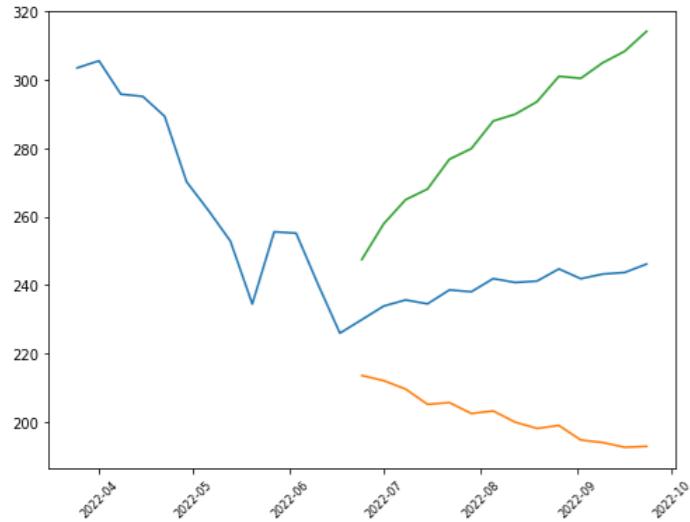
	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	225.869995	218.39857	242.946031	267.493493	271.133333	28.125894	214.881544	327.385121

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
VCR	1.292819	225.869995	2596418.164062	0.205768	0.641228	0.473825

	l axis	r axis
legend		legend
blue	symbol	magenta sector
green	trailing_1yr_max	cyan index
red	trailing_1yr_min	
orange	30d_vol_2yr	
black	risk_trend_factor/linear	
yellow	supply_trend_1yr	



ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'add', False]
best inner cv score, sdev (11 folds): 1227.2626281195471 1850.6109831569481
test cv mean error, stdev (10 folds): 1337.1747966756889 1906.3986371871604
sell date: 2022-09-23
expected return: 0.08950628504943088
discounted return: 0.0009123802651627155
quarter return: 1.0875209145152658



```

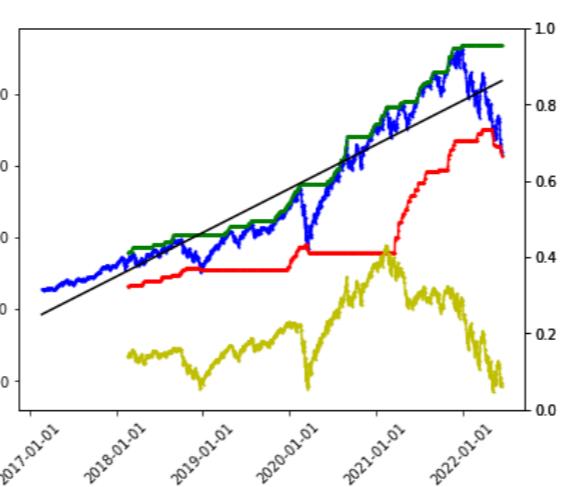
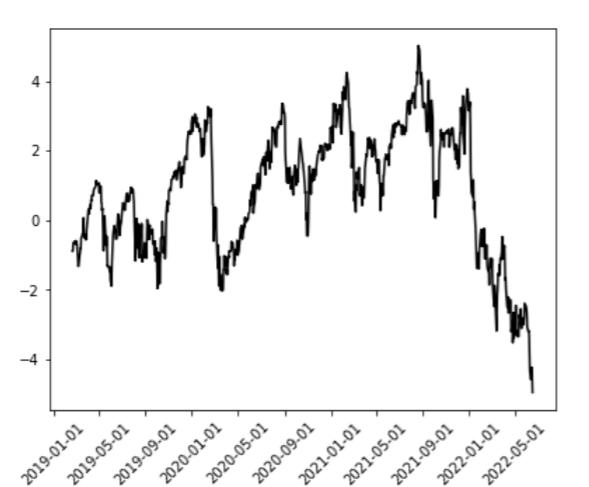
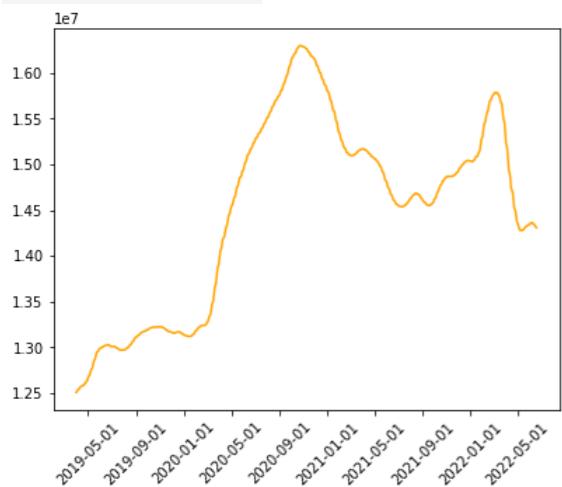
symbol: VGT
sector: error
sector: Technology
Index: nan
vol_30d_2yr: 14308852.5390625
Sector 1YMF: -363.4599914550781
1YMF: -363.4599914550781
risk trend factor: -4.954471974241429
totalAssets
VGT 5.044675e+10

```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSD	90d_lower	90d_upper
2022-06-17	319.809998	313.391914	345.179842	376.96777	371.755716	29.840347	312.075022	431.43641

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
VGT	1.152846	319.809998	14308852.539062	0.262275	0.685573	0.43018

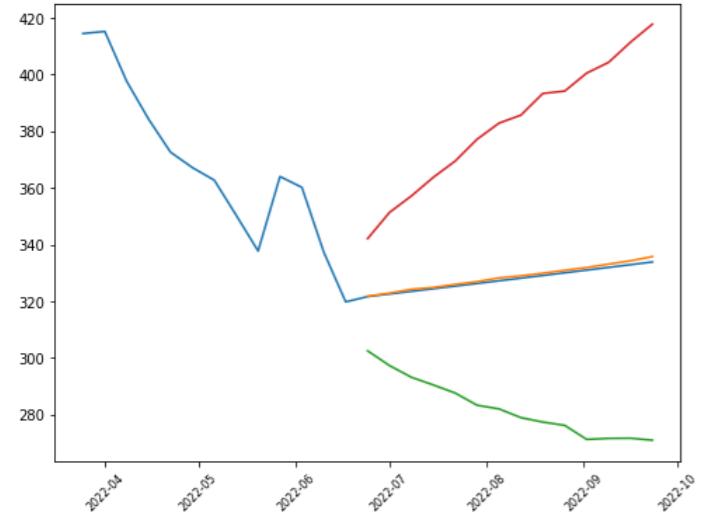
l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, 'mul', False]
best inner cv score, sdev (11 folds): 1350.193677658229 1233.359362744435
test cv mean error, stdev (10 folds): 1427.6805113722019 1267.7723899119896
sell date: 2022-09-23
expected return: 0.04405796862250232
discounted return: 0.000458775560857827
quarter return: 1.043100650903584

```



```

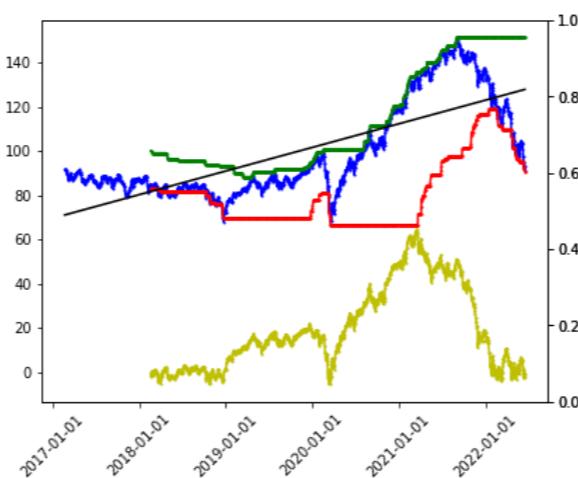
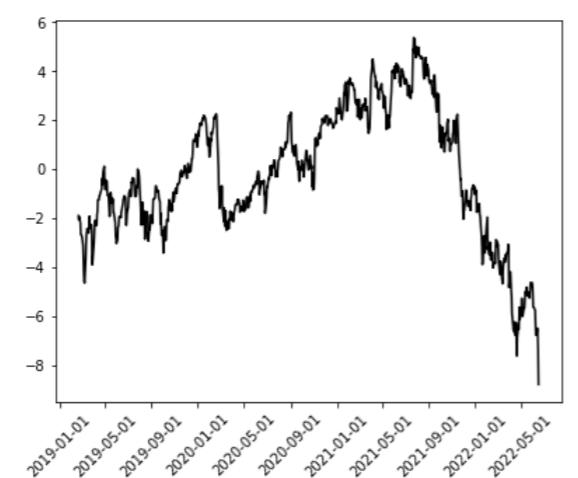
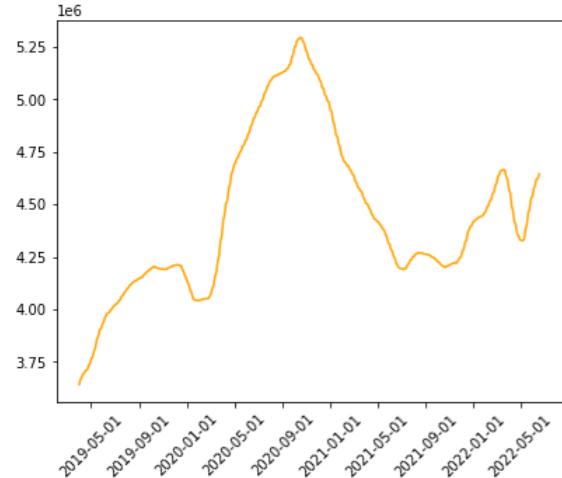
['options', ('2022-08-19',)]
symbol: VOX
sector: error
sector: Communication Services
Index: nan
vol_30d_2yr: 4644931.8359375
Sector 1YMF: -166.010009765625
1YMF: -166.010009765625
risk trend factor: -8.783597691159713
    totalAssets trailingPE
VOX 3.327463e+09 4.656447

```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDDev	90d_lower	90d_upper
2022-06-17	92.860001	91.464788	99.415079	107.365371	107.439841	9.28909	88.861661	126.018022

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
VOX	1.840996	92.860001	4644931.835938	0.059723	0.708136	0.512969

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		



```

inner cv scores:  

best model: ['add', 'mul', True]  

best inner cv score, sdev (11 folds): 132.7325527277386 122.26445062456351  

test cv mean error, stdev (10 folds): 142.3400353480088 124.21072042745833  

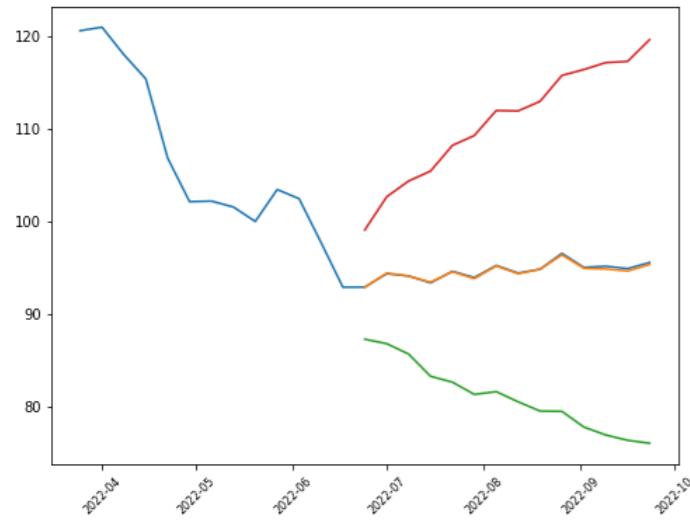
sell date: 2022-08-26  

expected return: 0.0393339470744943  

discounted return: 0.0005847174333815097  

quarter return: 1.055250600061591

```



```
[ 'options', ('2022-07-15',) ]
symbol: ACC
sector: Real Estate
Index: SP400
vol_30d_2yr: 27009982.03125
Sector 1YMF: 13.440017700195312
1YMF: 13.440017700195312
risk trend factor: 10.926847725292072
    beta currentRatio debtToEquity dividendRate dividendYield \
ACC 1.00147      2.184     122.276      1.88      0.029

earningsGrowth ebitda ebitdaMargins forwardPE grossMargins \
ACC 1.498 466354240 0.47421 98.630775 0.5349

grossProfits heldPercentInstitutions industry marketCap \
ACC 498042000 0.97986 REIT-Residential 8921355264

operatingMargins payoutRatio pegRatio priceToBook \
ACC 0.19318 4.7 1.96 2.988393

priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
ACC 9.071645 0.06005 1.888 0.01582

returnOnEquity revenueGrowth revenuePerShare sector \
ACC 0.01872 0.176 7.081 Real Estate

sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
ACC 139156992 0.86 87656000 0.63 4008523008

totalRevenue trailingPE
ACC 983433024 512.88
```

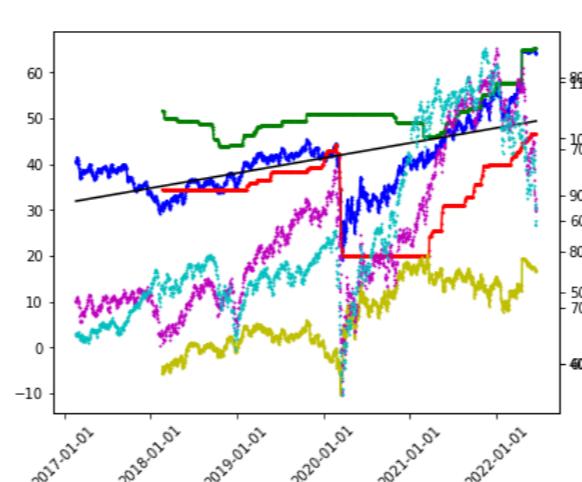
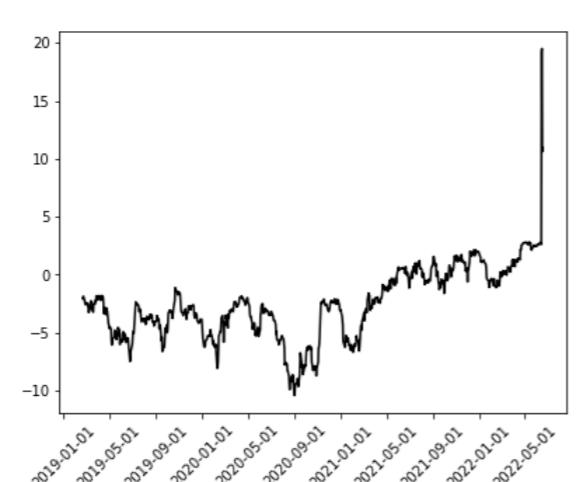
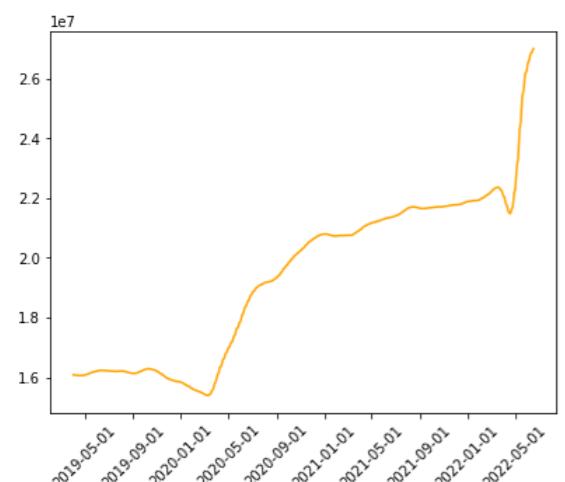
	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSD	90d_lower	90d_upper
2022-06-17	64.230003	64.240713	64.712222	65.183731	62.082857	3.916774	54.249309	69.916406

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
ACC	2.134689	64.230003	27009982.03125	0.97101	0.978004 0.420279

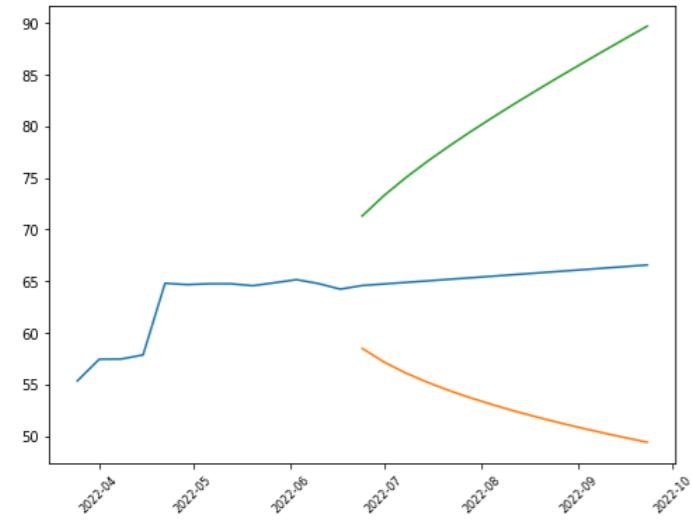
I axis r axis

legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Sector 1YMF: -76.09000396728516
Sector Volume Factor: 1.2315342134094496
Sector Risk Trend Factor: -3.053370235265123
Index 1YMF: -69.05999755859375
Index Volume Factor: 0.5765983741853883
Index Risk Trend Factor: -5.134573474205833



```
ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, 'add', False]
best inner cv score, sdev (11 folds): 60.642661849574026 138.4801125317066
test cv mean error, stdev (10 folds): 66.26514528140774 144.03707925063085
sell date: 2022-09-23
expected return: 0.0364129850039184
discounted return: 0.0003805585491178931
quarter return: 1.0356246034267633
```



```
[ 'quarterly_balance_sheet', 2022-03-31 2021-12-31 2021-09-30 \
Capital Surplus 4.693018e+09 4.694242e+09 4.538210e+09
Total Liab 4.218002e+09 4.273301e+09 4.501487e+09
Total Stockholder Equity 3.093994e+09 3.117378e+09 2.982993e+09
Minority Interest 1.842520e+08 1.839070e+08 6.423900e+07
Deferred Long Term Liab 7.300000e+06 3.450000e+07 2.750000e+07
Total Assets 7.496248e+09 7.574586e+09 7.548719e+09
Common Stock 1.393000e+06 1.391000e+06 1.390000e+06
Other Current Assets 1.698800e+07 1.432600e+07 2.016300e+07
Other Liab 1.522020e+08 1.697290e+08 1.850330e+08
Treasury Stock -1.600417e+08 -1.578255e+09 -1.556607e+09
Other Assets 2.143290e+08 1.773490e+08 2.318220e+08
Cash 8.765600e+07 1.203510e+08 4.207300e+07
Total Current Liabilities 5.727700e+07 1.168230e+08 9.838000e+07
Other Stockholder Equity -1.596530e+09 -1.574312e+09 -1.551896e+09
Property Plant Equipment 7.156799e+09 7.198609e+09 7.232212e+09
Total Current Assets 1.251200e+08 1.678280e+08 8.468500e+07
Net Tangible Assets 3.093994e+09 3.086578e+09 2.982993e+09
Net Receivables 2.047600e+07 3.268700e+07 2.218800e+07
Long Term Debt 3.509626e+09 3.513684e+09 3.723677e+09
Accounts Payable 5.727700e+07 9.306700e+07 9.838000e+07
Intangible Assets NaN 3.080000e+07 NaN
```

2021-06-30

```
Capital Surplus 4.515450e+09
Total Liab 4.437234e+09
Total Stockholder Equity 3.035925e+09
Minority Interest 6.528200e+07
Deferred Long Term Liab 2.460000e+07
Total Assets 7.538441e+09
Common Stock 1.386000e+06
Other Current Assets 2.747600e+07
Other Liab 1.373950e+08
Treasury Stock -1.480911e+09
Other Assets 2.333970e+08
Cash 3.028300e+07
Total Current Liabilities 6.970500e+07
Other Stockholder Equity -1.476181e+09
Property Plant Equipment 7.237327e+09
Total Current Assets 6.771700e+07
Net Tangible Assets 3.035925e+09
Net Receivables 9.775000e+06
Long Term Debt 3.734507e+09
Accounts Payable 6.970500e+07
Intangible Assets NaN ]
```

2022-03-31 2021-12-31 \

```
[ 'quarterly_cashflow', 2022-03-31 2021-12-31 \
Net Income 39183000.0 40712000.0
Change To Liabilities 0.0 -5928000.0
Total Cashflows From Investing Activities NaN -39104000.0
Net Borrowings NaN -203737000.0
Total Cash From Financing Activities NaN -2685000.0
Change To Operating Activities NaN -4668000.0
Issuance Of Stock NaN 1000.0
Change In Cash NaN 72441000.0
Total Cash From Operating Activities NaN 114230000.0
Depreciation NaN 69294000.0
Other Cashflows From Investing Activities NaN -436000.0
Dividends Paid NaN -65817000.0
Change To Account Receivables NaN 8001000.0
Other Cashflows From Financing Activities NaN 266868000.0
Change To Netincome NaN 5202000.0
Repurchase Of Stock NaN NaN
```

2021-09-30 2021-06-30

```
Net Income -11439000.0 -9402000.0
Change To Liabilities 28335000.0 11132000.0
Total Cashflows From Investing Activities -57467000.0 -76294000.0
Net Borrowings -10415000.0 53424000.0
Total Cash From Financing Activities -57209000.0 17226000.0
Change To Operating Activities 40390000.0 -29447000.0
Issuance Of Stock 21198000.0 38476000.0
Change In Cash 4477000.0 -747000.0
Total Cash From Operating Activities 119153000.0 51598000.0
Depreciation 69445000.0 68741000.0
Other Cashflows From Investing Activities 2944000.0 -961000.0
Dividends Paid -65948000.0 -65379000.0
Change To Account Receivables -12413000.0 3867000.0
Other Cashflows From Financing Activities -523000.0 -9295000.0
Change To Netincome 3365000.0 5289000.0
Repurchase Of Stock -1521000.0 -1521000.0 ]
```

['quarterly_earnings', Revenue Earnings

Quarter

Q22021	208521000	-9402000
3Q2021	228877000	-11439000
4Q2021	272289000	40712000
1Q2022	273746000	39183000

6/22/22, 7:59 AM

AnalyzeSP1500-Backup

```
[ 'quarterly_financials',
Research Development           None   None   None
Effect Of Accounting Charges  None   None   None
Income Before Tax              43060000.0 42051000.0 -13019000.0
Minority Interest               184252000.0 183907000.0 64239000.0
Net Income                      39183000.0 40712000.0 -11439000.0
Selling General Administrative  9098000.0 25234000.0 10309000.0
Gross Profit                    154845000.0 177993000.0 9480000.0
Ebit                           75195000.0 80965000.0 15046000.0
Operating Income                75195000.0 80965000.0 15046000.0
Other Operating Expenses        NaN    2500000.0 2500000.0
Interest Expense                -31675000.0 -31922000.0 -30741000.0
Extraordinary Items             None   None   None
Non Recurring                  None   None   None
Other Items                     None   None   None
Income Tax Expense              340000.0 340000.0 340000.0
Total Revenue                   273746000.0 272289000.0 228877000.0
Total Operating Expenses        198551000.0 191324000.0 213831000.0
Cost Of Revenue                 118901000.0 94296000.0 134077000.0
Total Other Income Expense Net -32135000.0 -38914000.0 -28065000.0
Discontinued Operations        None   None   None
Net Income From Continuing Ops 42720000.0 41711000.0 -13359000.0
Net Income Applicable To Common Shares 39183000.0 40299000.0 -12006000.0
```

2021-06-30

```
Research Development           None
Effect Of Accounting Charges  None
Income Before Tax              -10712000.0
Minority Interest               65282000.0
Net Income                      -9402000.0
Selling General Administrative 12093000.0
Gross Profit                    99534000.0
Ebit                           18700000.0
Operating Income                18700000.0
Other Operating Expenses        2500000.0
Interest Expense                -30658000.0
Extraordinary Items             None
Non Recurring                  None
Other Items                     None
Income Tax Expense              341000.0
Total Revenue                   208521000.0
Total Operating Expenses        189821000.0
Cost Of Revenue                 108987000.0
Total Other Income Expense Net -29412000.0
Discontinued Operations        None
Net Income From Continuing Ops -11053000.0
Net Income Applicable To Common Shares -9973000.0 ]
```

Holder Shares Date Reported % Out \

```
0 Vanguard Specialized-Real Estate Index Fund 6638008 2022-01-30 0.0476
1 Vanguard Total Stock Market Index Fund 3960227 2021-12-30 0.0284
2 iShares Core S&P Midcap ETF 3862557 2022-01-30 0.0277
3 Vanguard Small-Cap Index Fund 3503603 2021-12-30 0.0251
4 Allspring Special Mid Cap Value Fund 3211005 2022-02-27 0.0230
5 Vanguard Small-Cap Growth Index Fund 2184685 2021-12-30 0.0157
6 Vanguard Extended Market Index Fund 1858080 2021-12-30 0.0133
7 JP Morgan Small Cap Equity Fund 1574099 2021-12-30 0.0113
8 SPDR S&P Mid Cap 400 ETF Trust 1194316 2022-01-30 0.0086
9 Price (T.Rowe) Small Cap Stock Fund 1085917 2021-12-30 0.0078
```

```
Value
0 346902298
1 226881404
2 201857228
3 200721415
4 172784179
5 125160693
6 106449403
7 90180131
8 62414954
9 62212184 ]
```

```
symbol: MTOR
sector: error
sector: error
Index: SP600
vol_30d_2yr: 15456103.3203125
Sector 1YMF: 2.329998016357422
1YMF: 2.329998016357422
risk trend factor: 5.06522316023419
```

Empty DataFrame

Columns: []

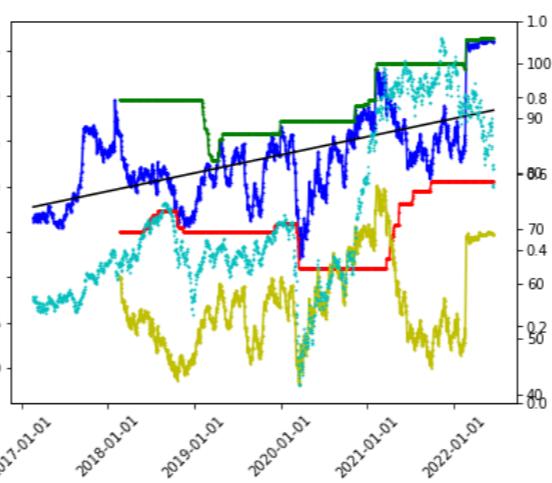
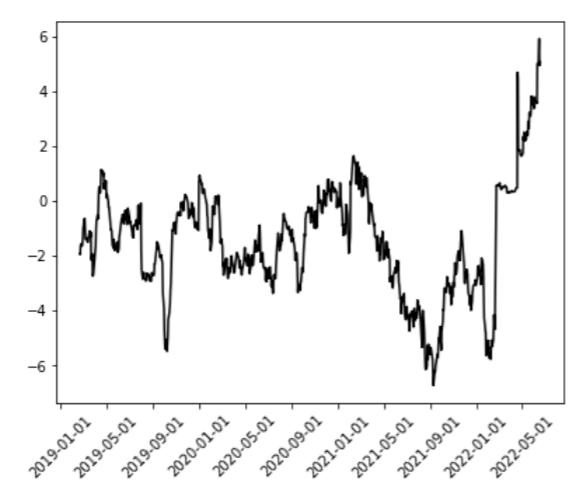
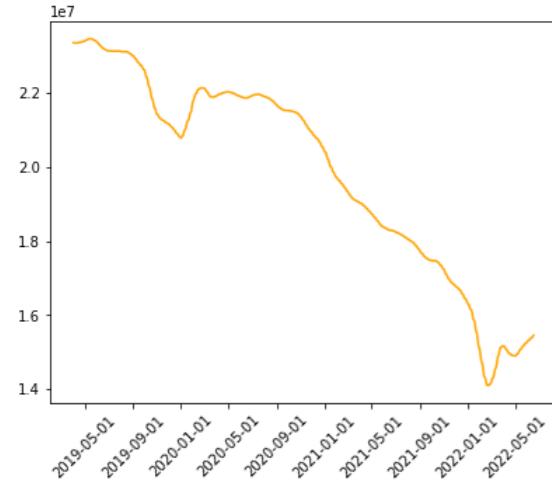
Index: [MTOR]

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	35.939999	35.942037	36.098889	36.25574	35.883651	0.243988	35.395675	36.371626

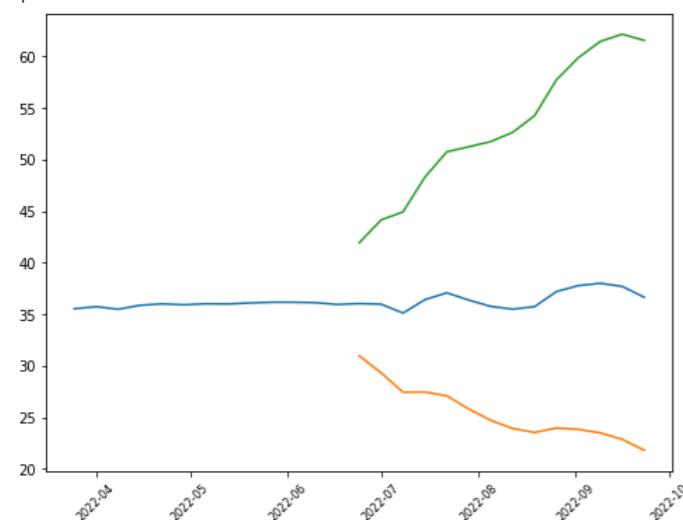
	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
MTOR	1.664475	35.939999	15456103.320312	0.980154	0.319063	0.43585

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Index 1YMF: -77.27001953125
 Index Volume Factor: 1.232760496116622
 Index Risk Trend Factor: -5.242200185196592



ets next 13 weeks
 2022-06-17
 2022-06-28
 inner cv scores:
 best model: ['add', 'add', False]
 best inner cv score, sdev (11 folds): 25.657795684653085 21.942882087651604
 test cv mean error, stdev (10 folds): 25.484582687900254 23.006729239118346
 sell date: 2022-09-09
 expected return: 0.057213883182052366
 discounted return: 0.0006957048365732188
 quarter return: 1.0660738393689655



```
[ 'options', ('2022-08-19',) ]
symbol: TVTY
sector: Healthcare
Index: SP600
vol_30d_2yr: 10900973.046875
Sector 1YMF: 2.7400035858154297
1YMF: 2.7400035858154297
risk trend factor: 2.3418794362082624
    beta currentRatio debtToEquity      ebitda ebitdaMargins forwardPE \
TVTY  2.297058      2.241     342.823  154480000      0.321  17.889503

    freeCashflow grossMargins grossProfits heldPercentInstitutions \
TVTY  64307500      0.42182   203000000      0.94288

    industry marketCap operatingCashflow operatingMargins \
TVTY  Medical Care Facilities  1610947200      87123000      0.29752

    payoutRatio pegRatio priceToBook priceToSalesTrailing12Months \
TVTY      0     -3.07    11.449788      3.347409

    profitMargins quickRatio returnOnAssets returnOnEquity revenueGrowth \
TVTY      0.218      2.01     0.15199     1.75218      0.26

    revenuePerShare sector sharesOutstanding shortRatio totalCash \
TVTY      9.708  Healthcare      49751300      2.34  109878000

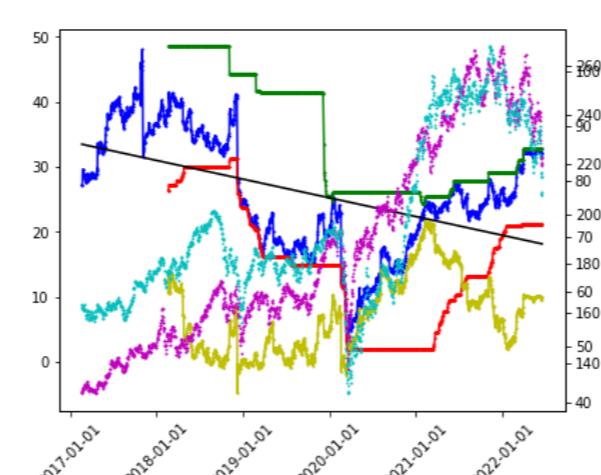
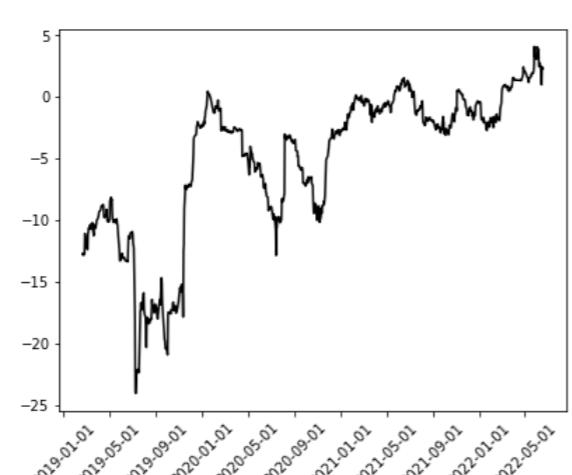
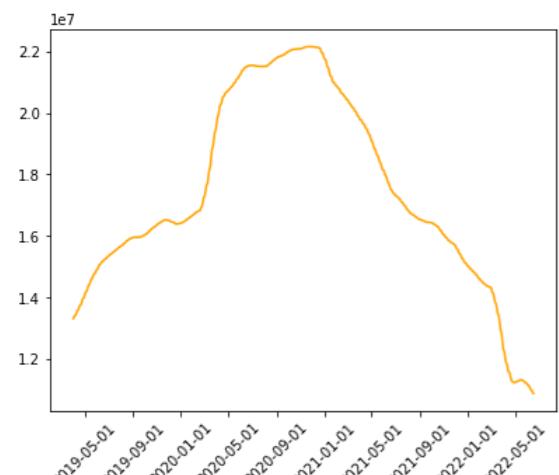
    totalCashPerShare totalDebt totalRevenue trailingPE
TVTY      2.205  407640992    481252000  13.668215
```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	32.130001	31.878985	32.19127	32.503555	31.861111	0.826432	30.208246	33.513976

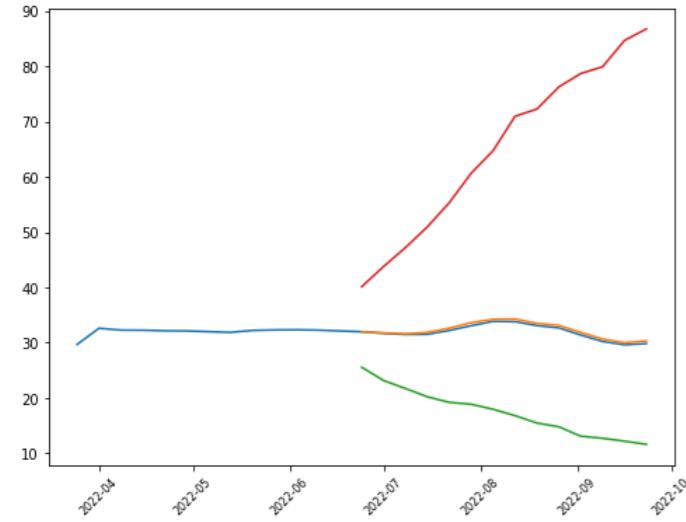
volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
TVTY	1.643789	32.130001	10900973.046875	0.966327	0.518794 0.448871

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Sector 1YMF: -122.20997619628906
Sector Volume Factor: 1.2238851152317325
Sector Risk Trend Factor: -3.3236323632363236
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592



```
ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'mul', True]
best inner cv score, sdev (11 folds): 18.832273205760917 14.827822378274357
test cv mean error, stdev (10 folds): 19.958988766128886 15.095907648564499
sell date: 2022-08-05
expected return: 0.05408821482336362
discounted return: 0.0011712663282752445
quarter return: 1.113706281548106
```



```
[{'quarterly_balance_sheet': 2021-12-31 2021-09-30 2021-06-30 \
Intangible Assets 29049000.0 29049000.0 29049000.0
Capital Surplus 514461000.0 514313000.0 512674000.0
Total Liab 479634000.0 490770000.0 488961000.0
Total Stockholder Equity 118907000.0 140669000.0 34787000.0
Other Current Liab 22671000.0 3686000.0 3937000.0
Total Assets 598541000.0 631439000.0 523748000.0
Common Stock 50000.0 49000.0 49000.0
Other Current Assets 13733000.0 15610000.0 16423000.0
Retained Earnings -359171000.0 -333825000.0 -436592000.0
Other Liab 3202000.0 846000.0 976000.0
Good Will 334680000.0 334680000.0 334680000.0
Treasury Stock -36433000.0 -39868000.0 -41344000.0
Other Assets 2969000.0 5736000.0 5872000.0
Cash 60132000.0 51755000.0 24226000.0
Total Current Liabilities 87423000.0 92830000.0 85472000.0
Short Long Term Debt 10625000.0 17234000.0 17724000.0
Other Stockholder Equity -8251000.0 -11686000.0 -13162000.0
Property Plant Equipment 35942000.0 32682000.0 34446000.0
Total Current Assets 195901000.0 229292000.0 108901000.0
Net Tangible Assets -244822000.0 -223060000.0 -328942000.0
Short Term Investments 49746000.0 91183000.0 NaN
Net Receivables 65825000.0 63963000.0 60600000.0
Long Term Debt 385522000.0 391666000.0 395112000.0
Accounts Payable 25325000.0 21188000.0 18982000.0
Deferred Long Term Asset Charges NaN 1643000.0 917000.0
Long Term Investments NaN NaN 10800000.0}
```

```
2021-03-31
```

```
Intangible Assets 29049000.0
Capital Surplus 513923000.0
Total Liab 513644000.0
Total Stockholder Equity 26254000.0
Other Current Liab 4351000.0
Total Assets 539898000.0
Common Stock 49000.0
Other Current Assets 19586000.0
Retained Earnings -444949000.0
Other Liab 1088000.0
Good Will 334680000.0
Treasury Stock -42769000.0
Other Assets 7194000.0
Cash 52428000.0
Total Current Liabilities 89125000.0
Short Long Term Debt 21651000.0
Other Stockholder Equity -14587000.0
Property Plant Equipment 36269000.0
Total Current Assets 121906000.0
Net Tangible Assets -337475000.0
Short Term Investments NaN
Net Receivables 45738000.0
Long Term Debt 413971000.0
Accounts Payable 18400000.0
Deferred Long Term Asset Charges 1186000.0
Long Term Investments 10800000.0 ]
```

```
2021-12-31 2021-09-30 \
```

```
['quarterly_cashflow', 2021-12-31 2021-09-30 \
Change To Liabilities -254000.0 96000.0
Total Cashflows From Investing Activities -9797000.0 -1582000.0
Net Borrowings -1869000.0 867000.0
Total Cash From Financing Activities -3727000.0 319000.0
Change To Operating Activities 1785000.0 5480000.0
Issuance Of Stock 52000.0 276000.0
Net Income -25346000.0 102767000.0
Change In Cash 8377000.0 27529000.0
Repurchase Of Stock -1910000.0 -824000.0
Total Cash From Operating Activities 21901000.0 28792000.0
Depreciation 3119000.0 2756000.0
Other Cashflows From Investing Activities 1046000.0 -1695000.0
Change To Account Receivables 1233000.0 -10823000.0
Change To Netincome 46028000.0 -81619000.0
Capital Expenditures -8096000.0 -2615000.0
Investments NaN 2728000.0
Other Cashflows From Financing Activities NaN NaN NaN
```

```
2021-06-30 2021-03-31
```

```
Change To Liabilities -1731000.0 -151000.0
Total Cashflows From Investing Activities -1399000.0 -3194000.0
Net Borrowings -32545000.0 -65043000.0
Total Cash From Financing Activities -40615000.0 -67381000.0
Change To Operating Activities -3034000.0 2438000.0
Issuance Of Stock 194000.0 164000.0
Net Income 8357000.0 19136000.0
Change In Cash -28202000.0 -47957000.0
Repurchase Of Stock -4311000.0 -2502000.0
Total Cash From Operating Activities 13812000.0 22618000.0
Depreciation 2740000.0 2683000.0
```

```
Other Cashflows From Investing Activities -1668000.0 -1633000.0
Change To Account Receivables -8181000.0 -18978000.0
Change To Netincome 20874000.0 5013000.0
Capital Expenditures -2478000.0 -1561000.0
Investments 2728000.0 2728000.0
Other Cashflows From Financing Activities -3953000.0 -3953000.0 ]
```

[`'quarterly_earnings'`, Revenue Earnings

Quarter

1Q2021	108085000	19136000
2Q2021	120071000	8357000
3Q2021	126289000	102767000
4Q2021	126808000	-25346000]

[`'quarterly_financials'`, 2021-12-31 2021-09-30 2021-06-30 \

Research Development	None	None	None
Effect Of Accounting Charges	None	None	None
Income Before Tax	-15424000.0	112624000.0	8958000.0
Minority Interest	None	None	None
Net Income	-25346000.0	102767000.0	8357000.0
Selling General Administrative	14551000.0	11995000.0	9930000.0
Gross Profit	48990000.0	51780000.0	51432000.0
Ebit	31320000.0	37029000.0	38762000.0
Operating Income	31320000.0	37029000.0	38762000.0
Other Operating Expenses	None	None	None
Interest Expense	-7934000.0	-7543000.0	-9659000.0
Extraordinary Items	None	None	None
Non Recurring	None	None	None
Other Items	None	None	None
Income Tax Expense	9614000.0	8925000.0	187000.0
Total Revenue	126808000.0	126289000.0	120071000.0
Total Operating Expenses	95488000.0	89260000.0	81309000.0
Cost Of Revenue	77818000.0	74509000.0	68639000.0
Total Other Income Expense Net	-46744000.0	75595000.0	-29804000.0
Discontinued Operations	-308000.0	-932000.0	-414000.0
Net Income From Continuing Ops	-25038000.0	103699000.0	8771000.0
Net Income Applicable To Common Shares	-25346000.0	102767000.0	8357000.0

2021-03-31

Research Development	None
Effect Of Accounting Charges	None
Income Before Tax	27564000.0
Minority Interest	None
Net Income	19136000.0
Selling General Administrative	9606000.0
Gross Profit	50800000.0
Ebit	38511000.0
Operating Income	38511000.0
Other Operating Expenses	None
Interest Expense	-9626000.0
Extraordinary Items	None
Non Recurring	None
Other Items	None
Income Tax Expense	7620000.0
Total Revenue	108085000.0
Total Operating Expenses	69574000.0
Cost Of Revenue	57285000.0
Total Other Income Expense Net	-10947000.0
Discontinued Operations	-808000.0
Net Income From Continuing Ops	19944000.0
Net Income Applicable To Common Shares	19136000.0]

[`'mutualfund_holders'`, Holder Shares Date Reported \

0	iShares Core S&P Smallcap ETF	3109924	2022-01-30
1	Trust for Advised Port-Miller Opportunity Trust	3000000	2021-12-30
2	Vanguard Total Stock Market Index Fund	1205505	2021-12-30
3	Vanguard Small-Cap Index Fund	1087474	2021-12-30
4	iShares Russell 2000 ETF	1007421	2022-01-30
5	Vanguard Small Cap Value Index Fund	675190	2021-12-30
6	John Hancock Small Cap Core Fd	673643	2022-01-30
7	Vanguard Extended Market Index Fund	579630	2021-12-30
8	iShares S&P Smallcap 600 Value ETF	389127	2022-01-30
9	Vanguard Tax Managed Fund-Small Cap Fund	367500	2021-12-30

% Out	Value
0 0.0624	79116466
1 0.0601	79320000
2 0.0242	31873552
3 0.0218	28752812
4 0.0202	25628790
5 0.0135	17852023
6 0.0135	17137477
7 0.0116	15325417
8 0.0078	9899390
9 0.0074	9716700]

[`'options'`, ('2022-08-19',)]

symbol: BANF

sector: error

sector: error

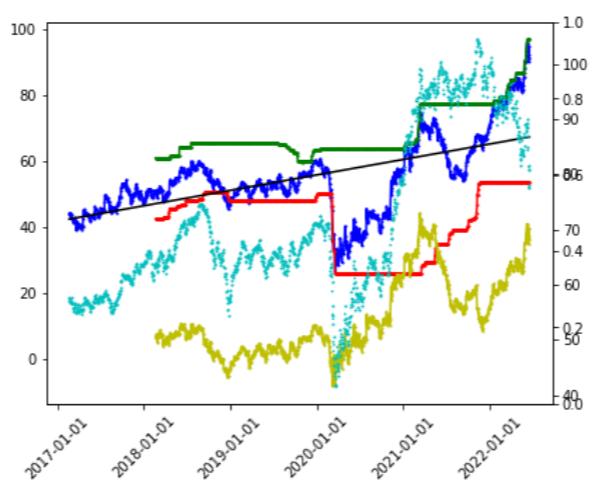
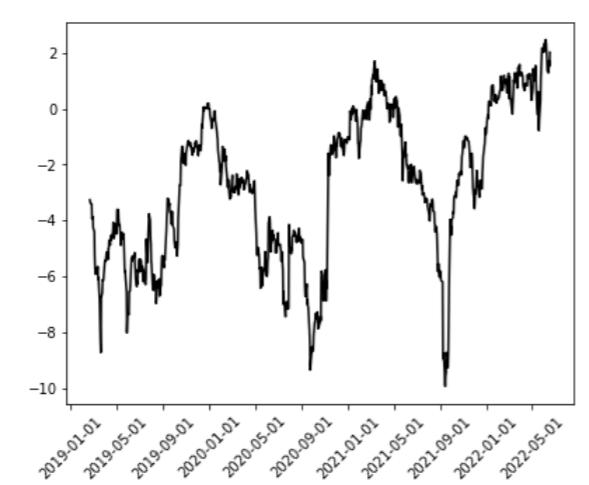
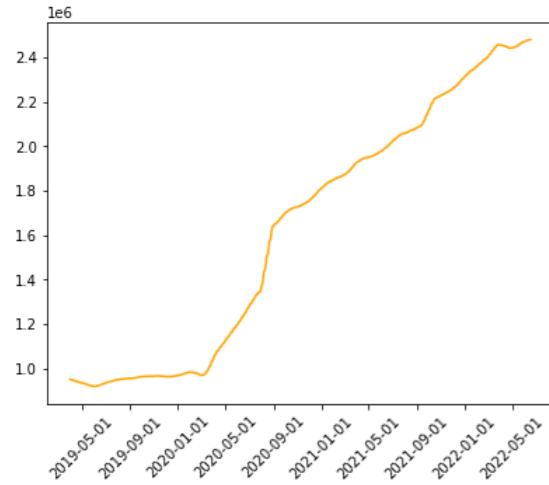
```
Index: SP600
vol_30d_2yr: 2480755.6640625
Sector 1YMF: 33.56000518798828
1YMF: 33.56000518798828
risk trend factor: 2.0119906818931326
Empty DataFrame
Columns: []
Index: [BANF]
```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDDev	90d_lower	90d_upper
2022-06-17	94.860001	81.144325	89.856826	98.569327	85.566191	4.220089	77.126013	94.006368

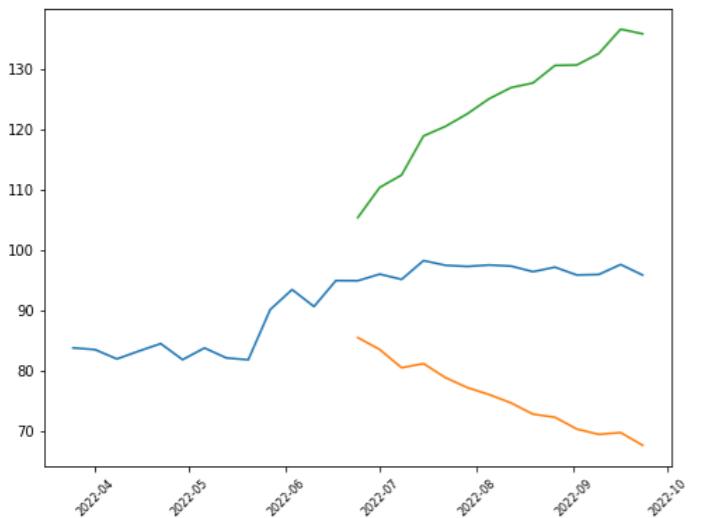
	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
BANF	1.135864	94.860001	2480755.664062	0.965783	0.955166	0.536352

	l axis	r axis
blue	symbol	legend
green	trailing_1yr_max	magenta
red	trailing_1yr_min	cyan
orange	30d_vol_2yr	sector
black	risk_trend_factor/linear	index
yellow	supply_trend_1yr	

```
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592
```



```
ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'add', False]
best inner cv score, sdev (11 folds): 111.50549269952572 87.12426882304617
test cv mean error, stdev (10 folds): 118.63569883513928 88.2636517227647
sell date: 2022-07-15
expected return: 0.034903714892172616
discounted return: 0.0014305386331057157
quarter return: 1.1405555942294
```



```

symbol: Y
sector: Financial Services
Index: SP400
vol_30d_2yr: 1623886.71875
Sector 1YMF: 27.8699951171875
1YMF: 27.8699951171875
risk trend factor: 1.771775570386466
    beta currentRatio debtToEquity earningsGrowth      ebitda \
Y  0.663839      1.597      31.5     -0.433  1620000000

ebitdaMargins forwardPE freeCashflow grossMargins grossProfits \
Y  0.13423   9.936376   90016496   0.44211  5101669000

heldPercentInstitutions           industry      marketCap \
Y  0.86723  Insurance--Property & Casualty  11220848640

operatingCashflow operatingMargins payoutRatio pegRatio priceToBook \
Y  1928840960      0.11935        0     0.15   1.305451

priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
Y  0.929715      0.0771      1.004     0.02938

returnOnEquity revenueGrowth revenuePerShare          sector \
Y  0.11868      0.025      878.577  Financial Services

sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
Y  13454900      2.32  2298860032      170.857  2822777088

totalRevenue trailingPE
Y  12069126144  12.311554

Adj Close  21dBOLD  21dMA-TP  21dBOLU  90dSMA  90dSDev  90d_lower  90d_upper
2022-06-17  830.5  830.573879  833.250157  835.926435  838.613332  7.460501  823.69233  853.534333

```

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst	
Y	1.56538	830.5	1623886.71875	0.919536	0.382688	0.459685

l axis r axis

legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		

orange	30d_vol_2yr
--------	-------------

black	risk_trend_factor/linear
-------	--------------------------

yellow	supply_trend_1yr
--------	------------------

Sector 1YMF: -72.2699966430664

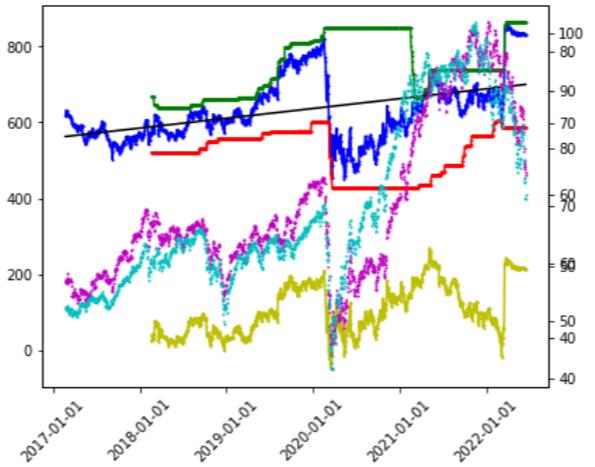
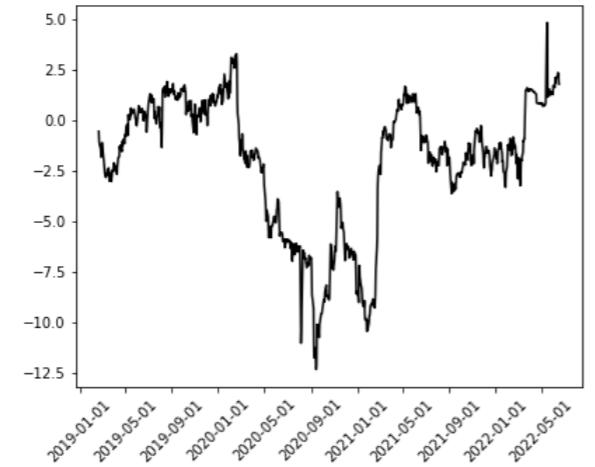
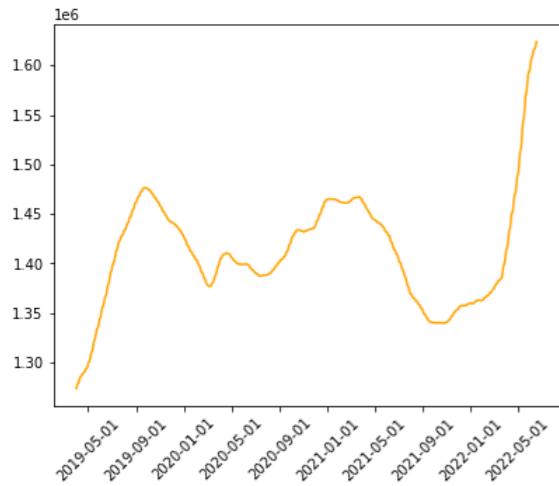
Sector Volume Factor: 1.2707168073107045

Sector Risk Trend Factor: -4.617890709055871

Index 1YMF: -69.05999755859375

Index Volume Factor: 0.5765983741853883

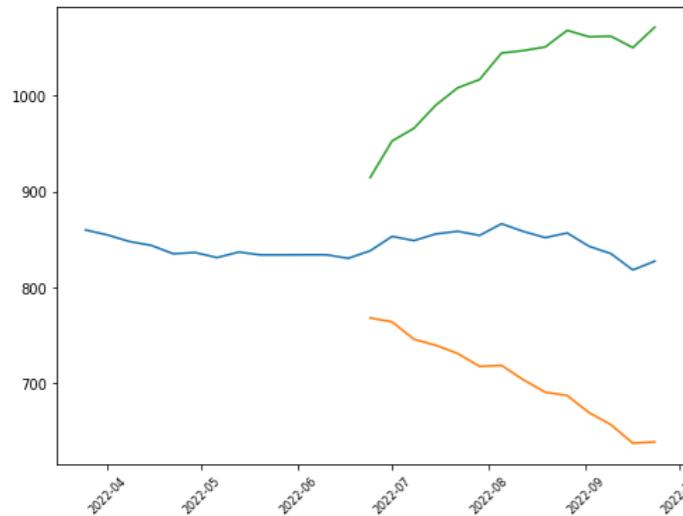
Index Risk Trend Factor: -5.134573474205833



```

inner cv scores:
best model: ['add', 'add', True]
best inner cv score, sdev (11 folds): 7631.68253996378 8525.18777804038
test cv mean error, stdev (10 folds): 8115.112821970264 8822.793630408927
sell date: 2022-08-05
expected return: 0.04333915755480232
discounted return: 0.0009432512083029643
quarter return: 1.0906111308529938

```



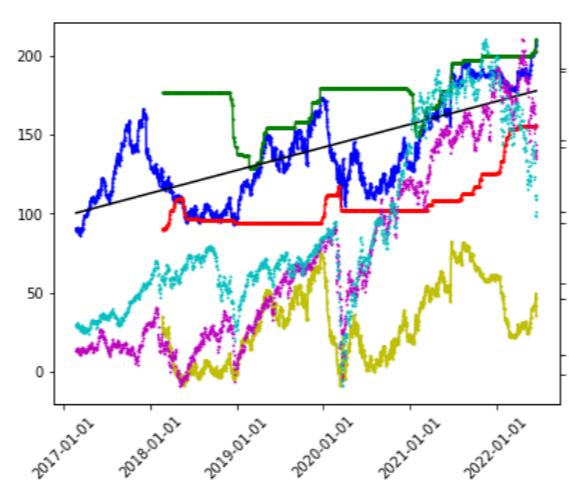
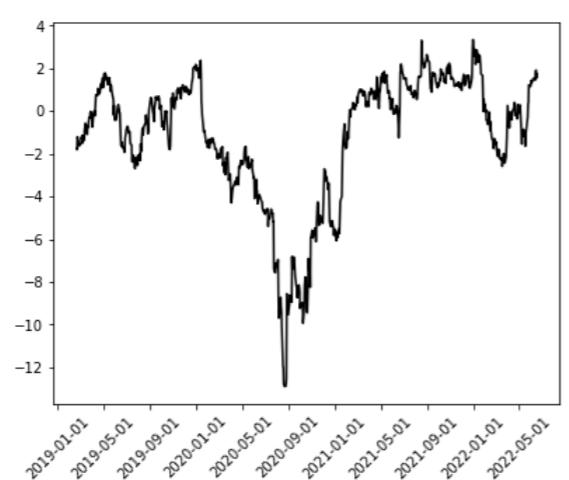
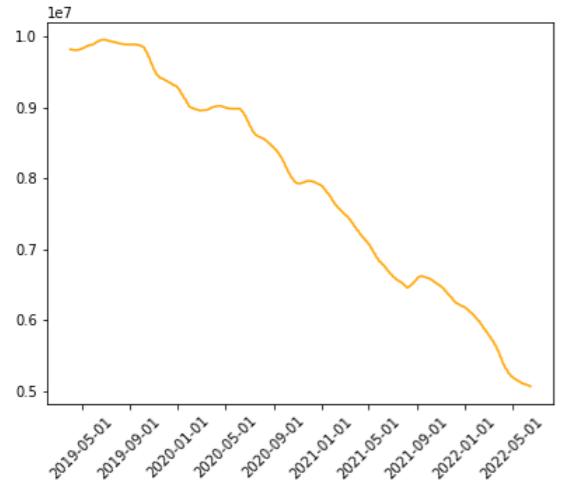
```
[{'options': ('2022-07-15',)],  
 ['sustainability',  
  2022-5  
  palmoil      False  
  controversialWeapons  False  
  gambling      False  
  socialScore    8.71  
  nuclear       False  
  furLeather    False  
  alcoholic     False  
  gmo           False  
  catholic      False  
  socialPercentile  None  
  peerCount     96  
  governanceScore 11.77  
  environmentPercentile  None  
  animalTesting  False  
  tobacco        False  
  totalEsg      21.71  
  highestControversy  1  
  esgPerformance AVG_PERF  
  coal          False  
  pesticides    False  
  adult         False  
  percentile    30.32  
  peerGroup     Insurance  
  smallArms     False  
  environmentScore 1.23  
  governancePercentile  None  
  militaryContract False]  
symbol: SAFM  
sector: Consumer Defensive  
Index: SP400  
vol_30d_2yr: 5061001.171875  
Sector 1YMF: 47.44999694824219  
1YMF: 47.44999694824219  
risk trend factor: 1.7515689687220128  
  beta currentRatio debtToEquity dividendRate dividendYield \  
SAFM 0.640199      5.529      0.877      1.76      0.0084  
  
  earningsGrowth   ebitda ebitdaMargins forwardPE freeCashflow \  
SAFM 2.316 1342139008 0.23866 6.957816 669912512  
  
  grossMargins grossProfits heldPercentInstitutions industry \  
SAFM 0.25714 907758000 0.80995 Packaged Foods  
  
  marketCap operatingCashflow operatingMargins payoutRatio pegRatio \  
SAFM 4749068800 954787008 0.20787 0.0455 -0.48  
  
  priceToBook priceToSalesTrailing12Months profitMargins quickRatio \  
SAFM 2.013895 0.844488 0.15341 3.785  
  
  returnOnAssets returnOnEquity revenueGrowth revenuePerShare \  
SAFM 0.30256 0.44602 0.358 255.051  
  
  sector sharesOutstanding shortRatio totalCash \  
SAFM Consumer Defensive 22320200 4.01 829123968  
  
  totalCashPerShare totalDebt totalRevenue trailingPE  
SAFM 37.147 20690000 5623608832 5.505331  
Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper  
2022-06-17 208.309998 186.953267 199.289207 211.625148 191.30127 7.50937 176.282531 206.320009
```

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
SAFM	1.334104	208.309998	5061001.171875	0.98121	0.675913	0.476629

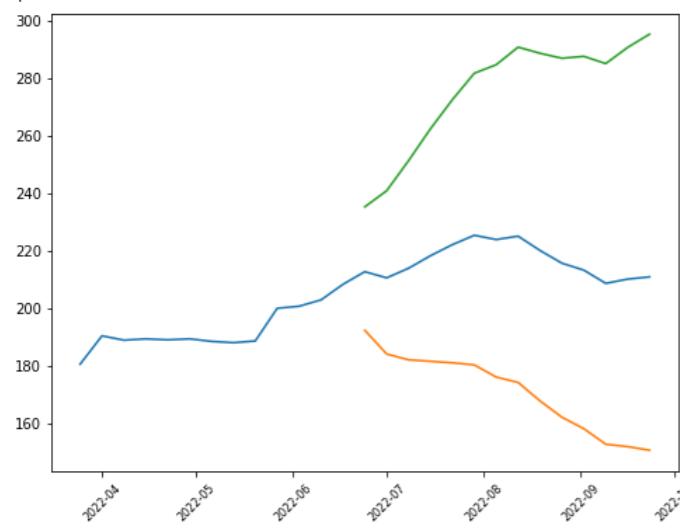
l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

6/22/22, 7:59 AM

Sector 1YMF: -74.80001831054688
Sector Volume Factor: 1.4135920452708397
Sector Risk Trend Factor: -2.283970024749523
Index 1YMF: -69.05999755859375
Index Volume Factor: 0.5765983741853883
Index Risk Trend Factor: -5.134573474205833



ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'add', False]
best inner cv score, sdev (11 folds): 435.2291282833939 593.8337555067529
test cv mean error, stdev (10 folds): 459.8900986528255 617.4241845581781
sell date: 2022-07-29
expected return: 0.0819708885324508
discounted return: 0.0020754211012470325
quarter return: 1.2101458334884323



['options', ('2022-08-19', '2022-12-16')]

symbol: SJI
sector: error
sector: error
Index: SP600
vol_30d_2yr: 26850614.0625
Sector 1YMF: 2.720003128051758
1YMF: 2.720003128051758
risk trend factor: 1.295238173088975
Empty DataFrame
Columns: []
Index: [SJI]

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	34.200001	33.571564	34.29746	35.023356	34.252857	0.376732	33.499393	35.006321

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
SJI	0.791297	34.200001	26850614.0625	0.934426	0.172286	0.415691

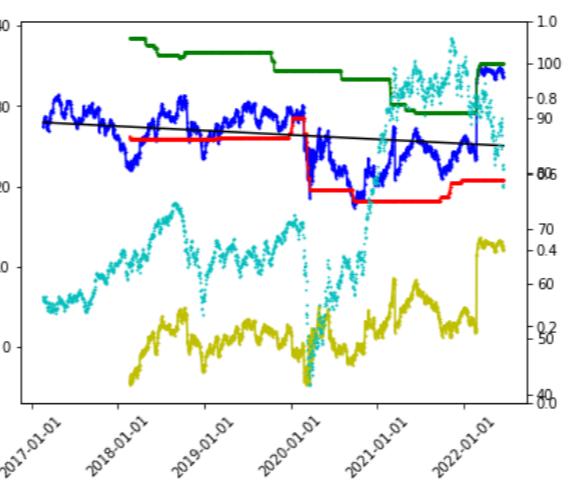
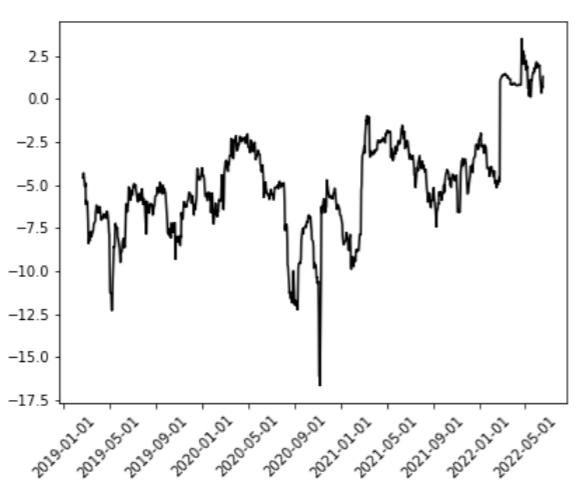
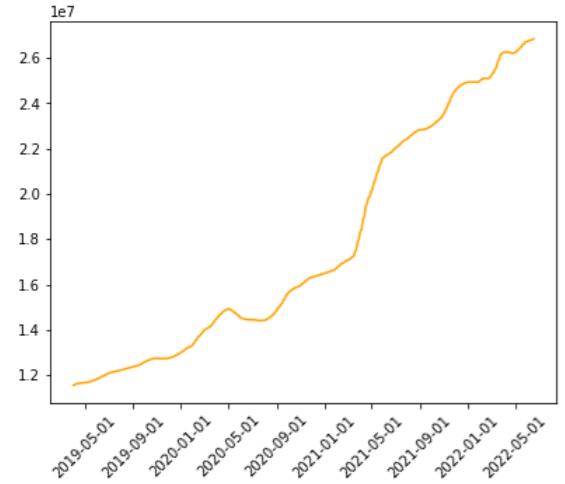
AnalyzeSP1500-Backup

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Index 1YMF: -77.27001953125

Index Volume Factor: 1.232760496116622

Index Risk Trend Factor: -5.242200185196592



ets next 13 weeks

2022-06-17

2022-06-28

inner cv scores:

best model: ['add', 'add', True]

best inner cv score, sdev (11 folds): 8.124418136441133 7.8591255045210895

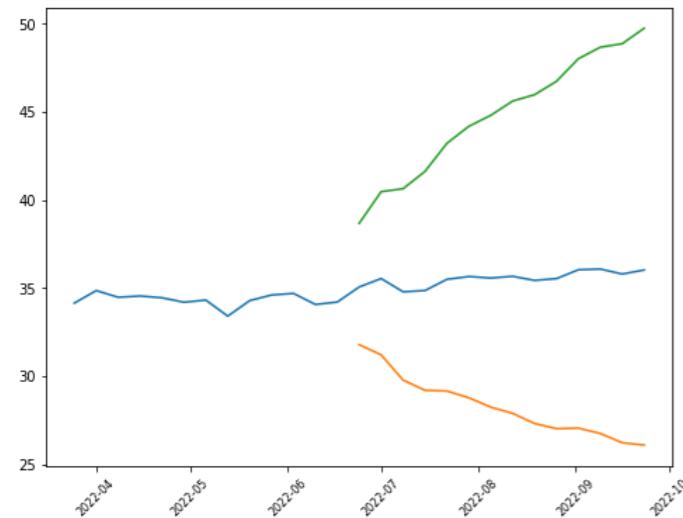
test cv mean error, stdev (10 folds): 8.67377471144766 8.038840268533503

sell date: 2022-09-09

expected return: 0.0547357696050763

discounted return: 0.0006663504154651445

quarter return: 1.0632006313523252



```
[ 'options', ('2022-07-15',) ]
symbol: LNTH
sector: Healthcare
Index: SP600
vol_30d_2yr: 14149384.1796875
Sector 1YMF: 22.491004943847656
1YMF: 22.491004943847656
risk trend factor: 1.1787739665678139
    beta currentRatio debtToEquity earningsGrowth      ebitda \
LNTH  0.943627      1.828      36.846      3.692  108329000

    ebitdaMargins forwardPE freeCashflow grossMargins grossProfits \
LNTH      0.20002  69.51685    77142872      0.50913  187695000

    heldPercentInstitutions           industry   marketCap \
LNTH      1.00644  Diagnostics & Research  4188017408

    operatingCashflow operatingMargins payoutRatio pegRatio priceToBook \
LNTH      54362000      0.11518          0     0.48    8.383469

    priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
LNTH      7.732976     -0.06892      1.563      0.04389

    returnOnEquity revenueGrowth revenuePerShare      sector \
LNTH     -0.07151      1.258      7.998  Healthcare

    sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
LNTH      67690600      1.93  105355000      1.535  190072992

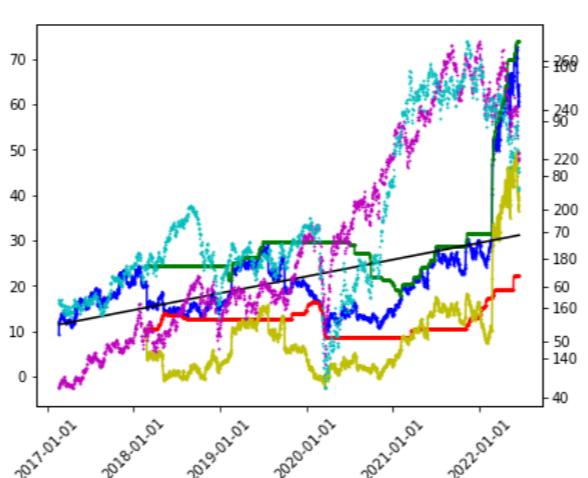
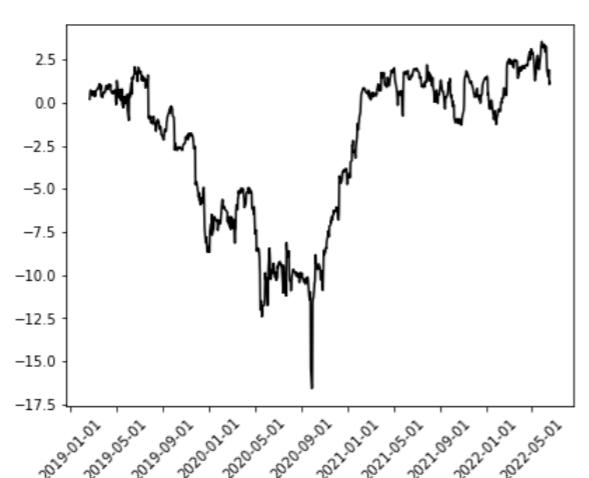
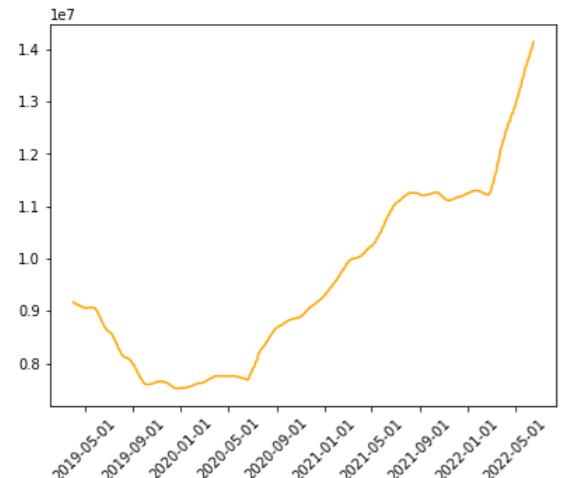
    totalRevenue
LNTH      541579008

Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper
2022-06-17 60.720001 58.693247 66.262412 73.831578 61.742857 5.236883 51.269091 72.216623
```

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
LNTH	1.823238	60.720001	14149384.179688	0.79355	0.965336	0.533209

	l axis	r axis
blue	symbol	magenta sector
green	trailing_1yr_max	cyan index
red	trailing_1yr_min	
orange	30d_vol_2yr	
black	risk_trend_factor/linear	
yellow	supply_trend_1yr	

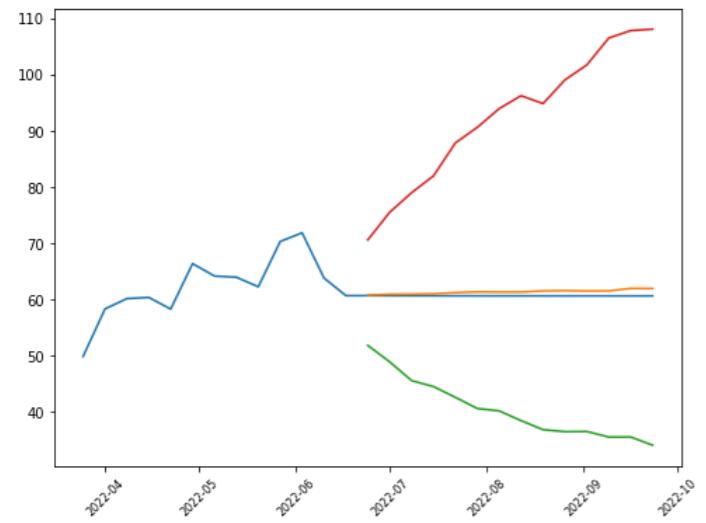
Sector 1YMF: -122.20997619628906
Sector Volume Factor: 1.2238851152317325
Sector Risk Trend Factor: -3.3236323632363236
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, 'mul', True]
best inner cv score, sdev (11 folds): 44.12135416231756 56.91591688465339
test cv mean error, stdev (10 folds): 42.361418181092105 59.407851146892575
sell date: 2022-06-24
expected return: -4.1656382031629715e-05
discounted return: -1.3885653487699656e-05
quarter return: 0.9987233266514252

```



```
['options', ('2022-07-15',)]
```

```

symbol: ROG
sector: error
sector: error
Index: SP600
vol_30d_2yr: 3248345.8984375
Sector 1YMF: 22.989990234375
1YMF: 22.989990234375
risk trend factor: 1.068804267635208
Empty DataFrame
Columns: []
Index: [ROG]
```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	259.380005	254.172765	260.19492	266.217074	267.576983	6.298768	254.979447	280.17452

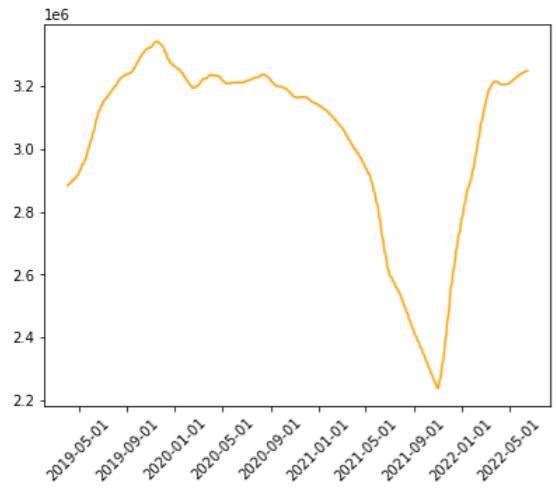
	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
ROG	0.980653	259.380005	3248345.898438	0.91539	0.71811	0.478768

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

```

Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592

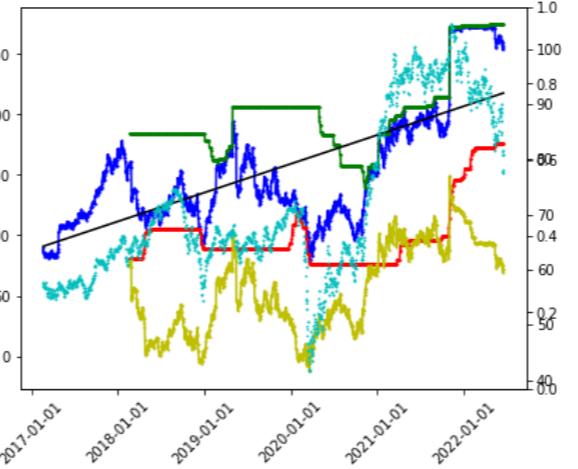
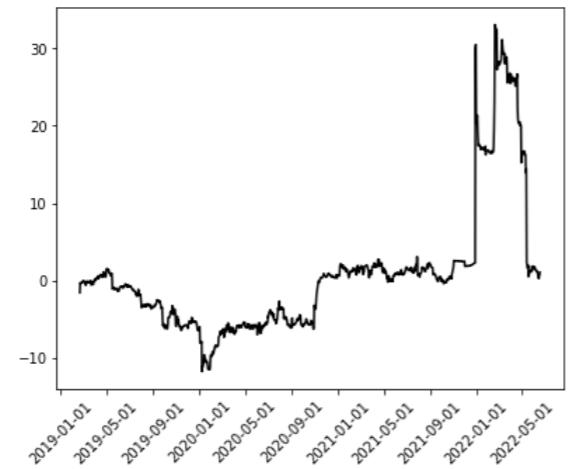
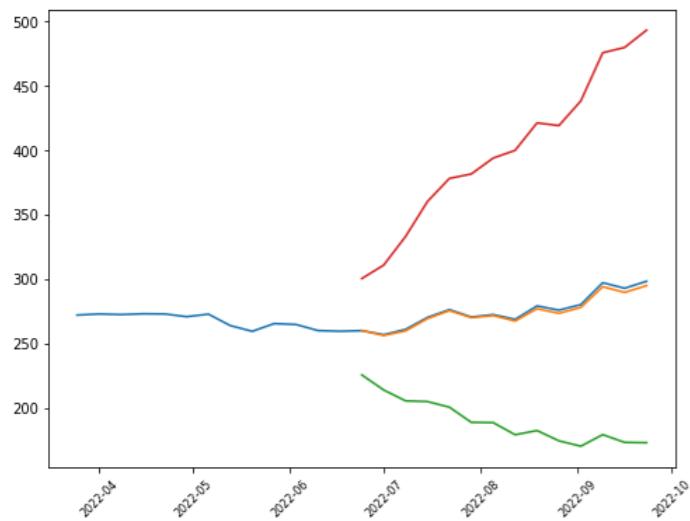
```



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'mul', False]
best inner cv score, sdev (11 folds): 1011.9720046449372 1503.6247182291634
test cv mean error, stdev (10 folds): 1106.8167146868577 1545.3239329875869
sell date: 2022-09-23
expected return: 0.14957701674217921
discounted return: 0.0014840156288102868
quarter return: 1.1461726163714616

```



```

symbol: TWI
sector: Industrials
Index: SP600
vol_30d_2yr: 10530212.5
Sector 1YMF: 6.0800018310546875
1YMF: 6.0800018310546875
risk trend factor: 0.9310876079145333
    beta currentRatio debtToEquity      ebitda ebitdaMargins forwardPE \
TWI  2.559313     1.804     223.947   133600000     0.07505   22.768293

    freeCashflow grossMargins grossProfits heldPercentInstitutions \
TWI  -7460500     0.12754   227051000     0.77188

        industry marketCap operatingCashflow \
TWI  Farm & Heavy Construction Machinery  1164625280     10726000

    operatingMargins payoutRatio pegRatio priceToBook \
TWI     0.04809     0.0     0.43   6.541696

    priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
TWI     0.654205     0.02785     0.841     0.04832

    returnOnEquity revenueGrowth revenuePerShare sector \
TWI     0.2329     0.492     28.667 Industrials

    sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
TWI     62379500     2.14   99404000     1.592  508744992

    totalRevenue trailingPE
TWI  1780215040     245.6579

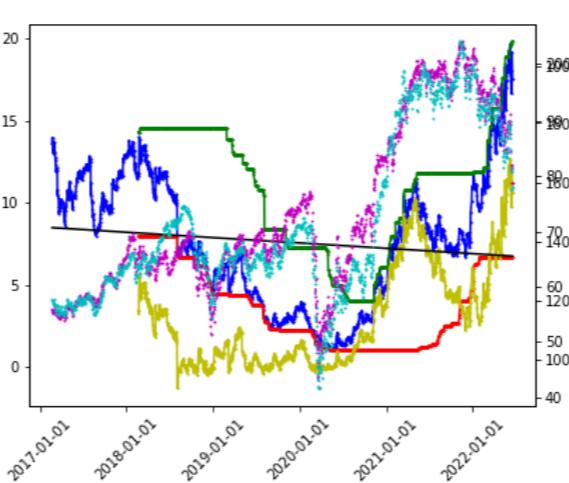
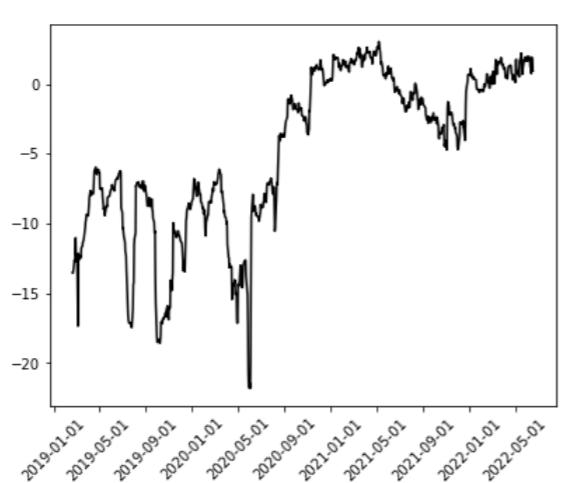
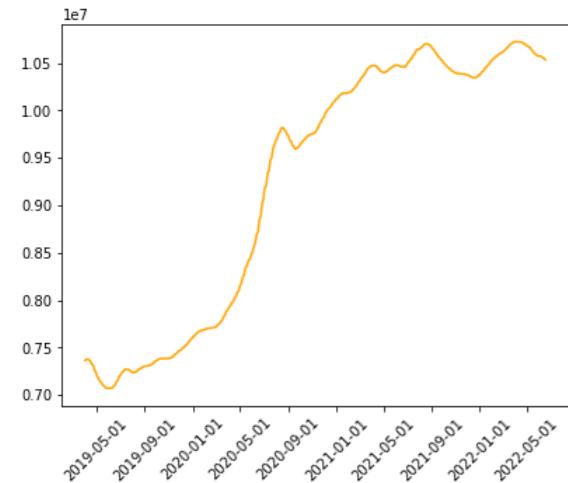
Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper
2022-06-17 17.52 16.247353 18.072381 19.897408 15.954921 1.924943 12.105034 19.804807

```

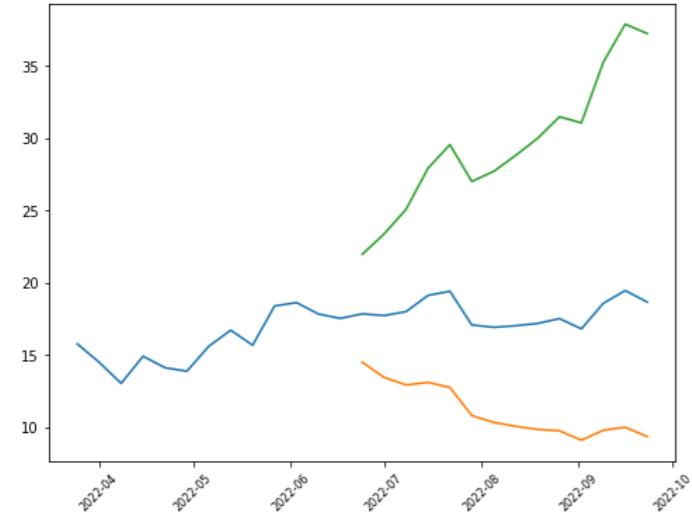
	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
TWI	1.389288	17.52	10530212.5	0.876816	0.791457	0.500704

	l axis	r axis
blue	symbol	magenta sector
green	trailing_1yr_max	cyan index
red	trailing_1yr_min	
orange	30d_vol_2yr	
black	risk_trend_factor/linear	
yellow	supply_trend_1yr	

Sector 1YMF: -141.5800018310547
Sector Volume Factor: 0.8696853533786545
Sector Risk Trend Factor: -4.514668337867341
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592



```
ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'add', False]
best inner cv score, sdev (11 folds): 4.439775837409856 6.248313548679662
test cv mean error, stdev (10 folds): 4.868335036362411 6.397286307309602
sell date: 2022-09-16
expected return: 0.10993460886029618
discounted return: 0.0011995821726895617
quarter return: 1.116607888809665
```



	2021-12-31	2021-09-30	2021-06-30	\
['quarterly_balance_sheet',				
Intangible Assets	1.498000e+06	1.535000e+06	1.572000e+06	
Capital Surplus	5.623400e+08	5.357020e+08	5.346970e+08	
Total Liab	9.555130e+08	9.446650e+08	9.242610e+08	
Total Stockholder Equity	2.293000e+08	1.779160e+08	1.815500e+08	
Minority Interest	-2.128000e+06	2.167800e+07	2.162700e+07	
Deferred Long Term Liab	3.330000e+05	Nan	Nan	
Other Current Liab	5.652900e+07	1.436020e+08	1.323050e+08	
Total Assets	1.182685e+09	1.144259e+09	1.127438e+09	
Other Current Assets	2.558900e+07	Nan	Nan	
Retained Earnings	-8.543900e+07	-1.130370e+08	-1.242240e+08	
Other Liab	3.701900e+07	4.054300e+07	4.186600e+07	
Treasury Stock	-2.476010e+08	-2.447490e+08	-2.289230e+08	
Other Assets	3.930700e+07	2.318200e+07	2.402300e+07	
Cash	9.810800e+07	9.464000e+07	9.580400e+07	
Total Current Liabilities	4.508130e+08	4.369120e+08	4.136130e+08	
Deferred Long Term Asset Charges	1.683100e+07	2.582000e+06	2.780000e+06	
Short Long Term Debt	3.250000e+07	3.086700e+07	3.429600e+07	
Other Stockholder Equity	-2.464800e+08	-2.436280e+08	-2.278020e+08	
Property Plant Equipment	3.220540e+08	3.232990e+08	3.296030e+08	
Total Current Assets	8.133040e+08	7.962430e+08	7.722400e+08	
Long Term Investments	6.522000e+06	Nan	Nan	
Net Tangible Assets	2.278020e+08	1.763810e+08	1.799780e+08	
Short Term Investments	1.296000e+06	Nan	Nan	
Net Receivables	2.796520e+08	2.614470e+08	2.657290e+08	
Long Term Debt	4.524510e+08	4.509990e+08	4.527300e+08	
Inventory	3.926150e+08	3.730120e+08	3.453390e+08	
Accounts Payable	2.780990e+08	2.538190e+08	2.390010e+08	

2021-03-31

Intangible Assets	1.701000e+06
Capital Surplus	5.335690e+08
Total Liab	8.823160e+08
Total Stockholder Equity	1.679950e+08
Minority Interest	2.113700e+07
Deferred Long Term Liab	Nan
Other Current Liab	1.221630e+08
Total Assets	1.071448e+09
Other Current Assets	Nan
Retained Earnings	-1.214510e+08
Other Liab	4.254900e+07
Treasury Stock	-2.441230e+08
Other Assets	2.587200e+07
Cash	9.595400e+07
Total Current Liabilities	3.822460e+08
Deferred Long Term Asset Charges	2.186000e+06
Short Long Term Debt	3.107600e+07
Other Stockholder Equity	-2.430060e+08
Property Plant Equipment	3.283100e+08
Total Current Assets	7.155650e+08
Long Term Investments	Nan
Net Tangible Assets	1.662940e+08
Short Term Investments	Nan
Net Receivables	2.499040e+08
Long Term Debt	4.405760e+08
Inventory	3.134720e+08
Accounts Payable	2.216130e+08

['quarterly_cashflow', 2021-12-31 2021-09-30 2021-06-30 \]

Change To Liabilities	28805000.0	21333000.0	10470000.0
Total Cashflows From Investing Activities	-14488000.0	-9223000.0	-5572000.0
Net Borrowings	5623000.0	-3545000.0	3406000.0
Total Cash From Financing Activities	6671000.0	-3574000.0	3775000.0
Change To Operating Activities	-24377000.0	13138000.0	-4876000.0
Net Income	27598000.0	11187000.0	-2773000.0
Change In Cash	3468000.0	-1164000.0	-150000.0
Effect Of Exchange Rate	-1731000.0	-3564000.0	3172000.0
Total Cash From Operating Activities	13016000.0	15197000.0	-1525000.0
Depreciation	11646000.0	11427000.0	12358000.0
Other Cashflows From Investing Activities	1203000.0	1203000.0	1203000.0
Change To Inventory	-23354000.0	-36416000.0	-25767000.0
Change To Account Receivables	720000.0	-2691000.0	-8962000.0
Other Cashflows From Financing Activities	1048000.0	-29000.0	369000.0
Change To Netincome	-8022000.0	-2781000.0	18025000.0
Capital Expenditures	-14552000.0	-9613000.0	-5776000.0

2021-03-31

Change To Liabilities	60581000.0
Total Cashflows From Investing Activities	-8316000.0
Net Borrowings	9483000.0
Total Cash From Financing Activities	7074000.0
Change To Operating Activities	-1661000.0
Net Income	13574000.0
Change In Cash	-21477000.0
Effect Of Exchange Rate	-4273000.0
Total Cash From Operating Activities	-15962000.0
Depreciation	12560000.0

```
Other Cashflows From Investing Activities 1203000.0
Change To Inventory -27313000.0
Change To Account Receivables -63803000.0
Other Cashflows From Financing Activities -2409000.0
Change To Netincome -9900000.0
Capital Expenditures -8861000.0 ]
```

```
[ 'quarterly_earnings', Revenue Earnings
```

```
Quarter
```

```
1Q2021 403518000 13574000
```

```
2Q2021 438639000 -2773000
```

```
3Q2021 450382000 11187000
```

```
4Q2021 487676000 27598000]
```

```
[ 'quarterly_financials',
```

```
Research Development 2653000.0 2370000.0 2528000.0 ]
```

```
Effect Of Accounting Charges None None None
```

```
Income Before Tax 19512000.0 16146000.0 -435000.0
```

```
Minority Interest -2128000.0 21678000.0 21627000.0
```

```
Net Income 27598000.0 11187000.0 -2773000.0
```

```
Selling General Administrative 32887000.0 32097000.0 32435000.0
```

```
Gross Profit 59939000.0 57487000.0 58813000.0
```

```
Ebit 24399000.0 23020000.0 23850000.0
```

```
Operating Income 24399000.0 23020000.0 23850000.0
```

```
Other Operating Expenses None None None
```

```
Interest Expense -8282000.0 -7818000.0 -8598000.0
```

```
Extraordinary Items None None None
```

```
Non Recurring None None None
```

```
Other Items None None None
```

```
Income Tax Expense -8778000.0 5342000.0 1991000.0
```

```
Total Revenue 487676000.0 450382000.0 438639000.0
```

```
Total Operating Expenses 463277000.0 427362000.0 414789000.0
```

```
Cost Of Revenue 427737000.0 392895000.0 379826000.0
```

```
Total Other Income Expense Net -4887000.0 -6874000.0 -24285000.0
```

```
Discontinued Operations None None None
```

```
Net Income From Continuing Ops 28290000.0 10804000.0 -2426000.0
```

```
Net Income Applicable To Common Shares 27598000.0 11187000.0 -2773000.0
```

```
2021-03-31
```

```
Research Development 2553000.0
```

```
Effect Of Accounting Charges None
```

```
Income Before Tax 15817000.0
```

```
Minority Interest 21137000.0
```

```
Net Income 13574000.0
```

```
Selling General Administrative 33919000.0
```

```
Gross Profit 50812000.0
```

```
Ebit 14340000.0
```

```
Operating Income 14340000.0
```

```
Other Operating Expenses None
```

```
Interest Expense -7523000.0
```

```
Extraordinary Items None
```

```
Non Recurring None
```

```
Other Items None
```

```
Income Tax Expense 2594000.0
```

```
Total Revenue 403518000.0
```

```
Total Operating Expenses 389178000.0
```

```
Cost Of Revenue 352706000.0
```

```
Total Other Income Expense Net 1477000.0
```

```
Discontinued Operations None
```

```
Net Income From Continuing Ops 13223000.0
```

```
Net Income Applicable To Common Shares 13574000.0 ]
```

```
Holder Shares Date Reported ]
```

```
0 iShares Core S&P Smallcap ETF 3592689 2022-01-30
```

```
1 Vanguard Total Stock Market Index Fund 1428714 2021-12-30
```

```
2 iShares Russell 2000 ETF 1169621 2022-01-30
```

```
3 DFA U.S. Targeted Value Portfolio 913866 2022-01-30
```

```
4 iShares S&P Smallcap 600 Value ETF 845888 2022-01-30
```

```
5 Vanguard Extended Market Index Fund 730638 2021-12-30
```

```
6 Invesco ETF Tr-Invesco S&P Small Cap Value Wit... 651906 2022-01-30
```

```
7 iShares Russell 2000 Value ETF 454628 2022-01-30
```

```
8 DFA U.S. Small Cap Series 451597 2022-01-30
```

```
9 Vanguard Tax Managed Fund-Small Cap Fund 416749 2021-12-30
```

```
% Out Value
```

```
0 0.0573 35028717
```

```
1 0.0228 15658705
```

```
2 0.0187 11403804
```

```
3 0.0146 8910193
```

```
4 0.0135 8247408
```

```
5 0.0117 8007792
```

```
6 0.0104 6356083
```

```
7 0.0073 4432623
```

```
8 0.0072 4403070
```

```
9 0.0067 4567569 ]
```

```
[ 'options', ('2022-07-15',)]
```

```
symbol: PBF
```

```
sector: Energy
```

```
Index: SP600
```

```

vol_30d_2yr: 92668774.0234375
Sector 1YMF: 17.619998931884766
1YMF: 17.619998931884766
risk trend factor: 0.8876574451557954
          beta currentRatio debtToEquity      ebitda ebitdaMargins forwardPE \
PBF   2.259981           1.254       197.914  690400000    0.02194  13.134545

          freeCashflow grossMargins grossProfits heldPercentInstitutions \
PBF   284750016        0.0362     671100000            0.80167

          industry marketCap operatingCashflow \
PBF Oil & Gas Refining & Marketing 4364307456         803299968

          operatingMargins payoutRatio pegRatio priceToBook \
PBF           0.0135        0     -0.18    2.279871

          priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
PBF           0.13868       0.00798     0.629      0.02192

          returnOnEquity revenueGrowth revenuePerShare sector sharesOutstanding \
PBF           0.14223       0.856      261.505 Energy      120828000

          shortRatio totalCash totalCashPerShare totalDebt totalRevenue \
PBF           2.81    1434599936        11.873  4999499776  31470299136

          trailingPE
PBF 17.508482

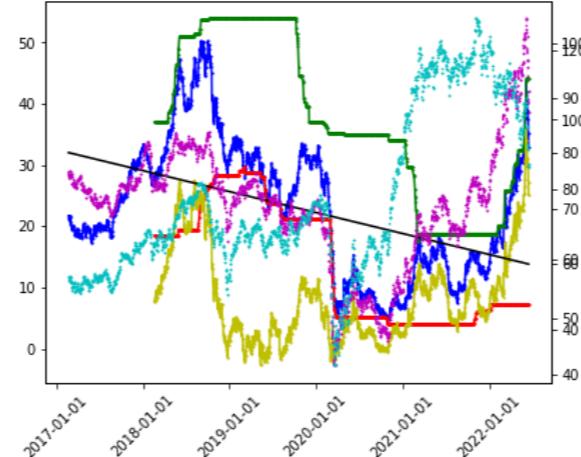
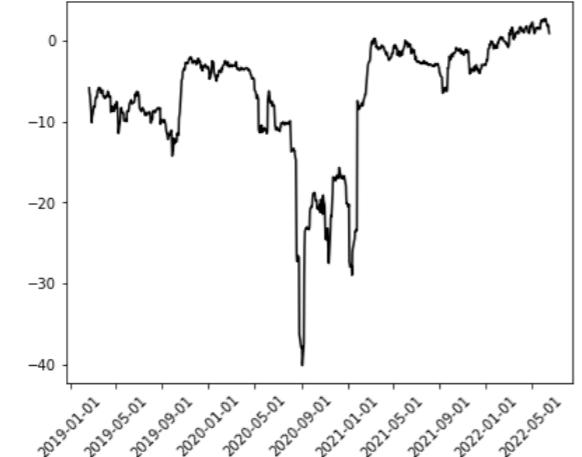
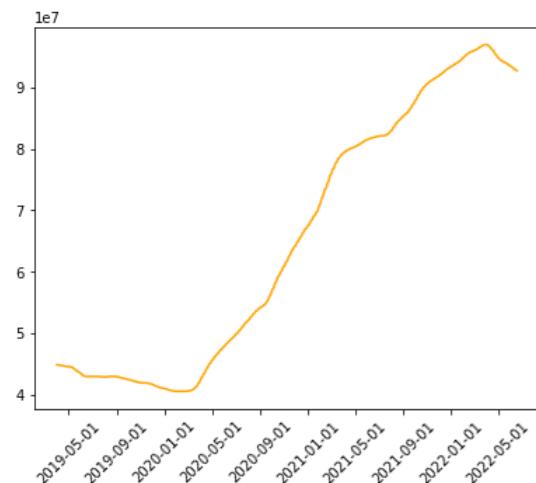
          Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper
2022-06-17      32.98 27.175062 35.668889 44.162716 29.964286 5.34115 19.281986

```

	volume_factor	latest_p	vsl_300_2y	pct_2y	adr	hurst
PBF	0.835417	32.98	92668774.023438	0.721917	0.581704	0.554972

l axis		r axis	
	legend		legend
blue	symbol		
green	trailing_1yr_max	magenta	sector
red	trailing_1yr_min		cyan
orange	30d_vol_2yr		index
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

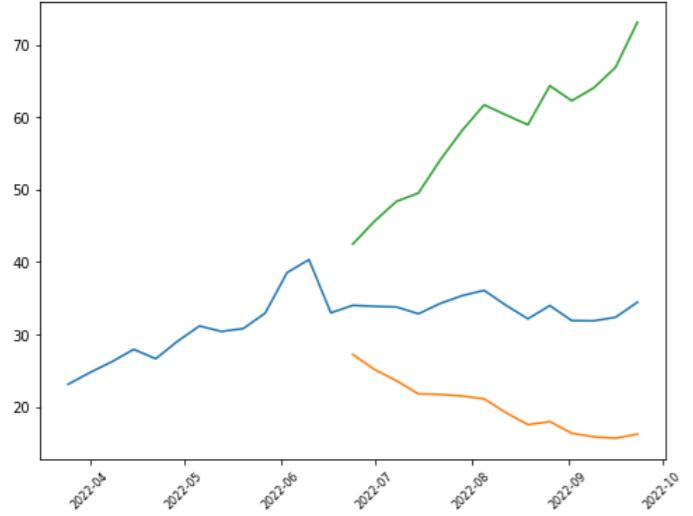
Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', None]
best inner cv score, sdev (11 folds): 32.03876352967298 24.823209453373853
test cv mean error, stdev (10 folds): 30.715015364396418 25.661947155549548
sell date: 2022-08-05
expected return: 0.09416869929540587
discounted return: 0.0020018876896275017
quarter return: 1.2020032808559844

```



```
['options', ('2022-07-15', '2022-12-16', '2023-01-20', '2024-01-19')]
```

```

symbol: GO
sector: Consumer Defensive
Index: SP400
vol_30d_2yr: 21744971.2890625
Sector 1YMF: 9.090003967285156
1YMF: 9.090003967285156
risk trend factor: 0.8421349867224205
    beta currentRatio debtToEquity earningsGrowth      ebitda \
GO -0.204778     1.904      144.187      -0.368   158646000

    ebitdaMargins forwardPE freeCashflow grossMargins grossProfits \
GO     0.05023   36.156525     -14480875      0.30639   948786000

    heldPercentInstitutions      industry marketCap operatingCashflow \
GO      1.05602  Grocery Stores  4006956544      175503008

    operatingMargins payoutRatio pegRatio priceToBook \
GO      0.02681        0       3.5     3.909365

    priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
GO      1.268609      0.01741      0.611      0.02033

    returnOnEquity revenueGrowth revenuePerShare      sector \
GO      0.05577      0.105      32.914  Consumer Defensive

    sharesOutstanding shortRatio totalCash totalCashPerShare  totalDebt \
GO      96367400       6.55    137996000      1.432   1476578944

    totalRevenue trailingPE
GO      3158543104      74.25

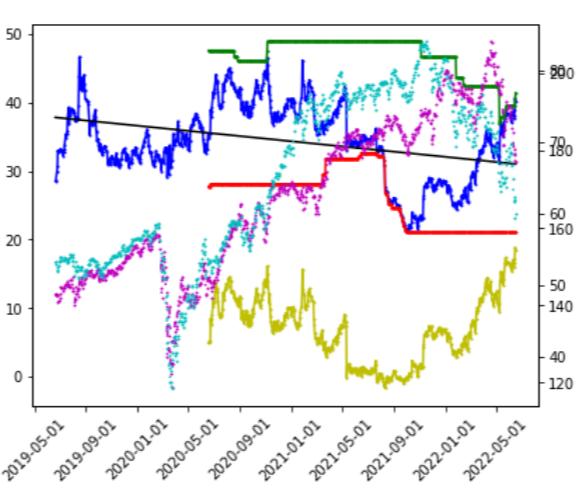
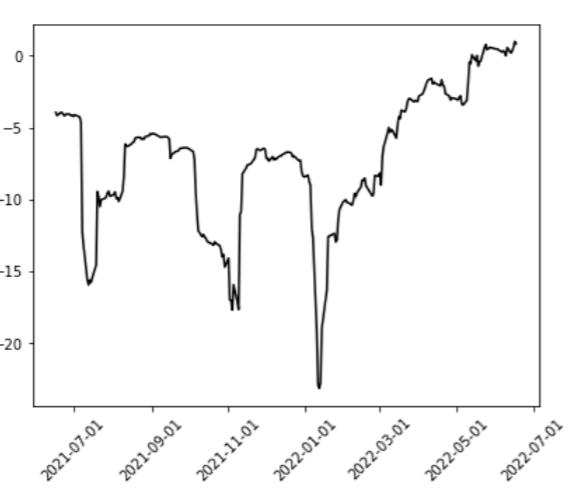
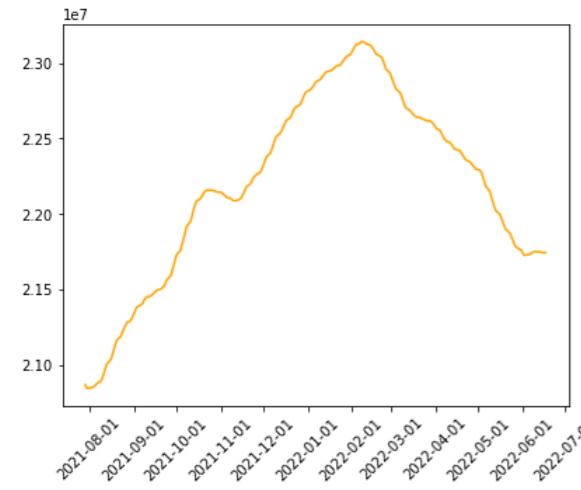
    Adj Close  21dBOLD  21dMA-TP  21dBOLU  90dSMA  90dSDev  90d_lower  90d_upper
2022-06-17  40.150002  35.915072  38.024936  40.134801  35.226667  2.439389  30.347888  40.105445

```

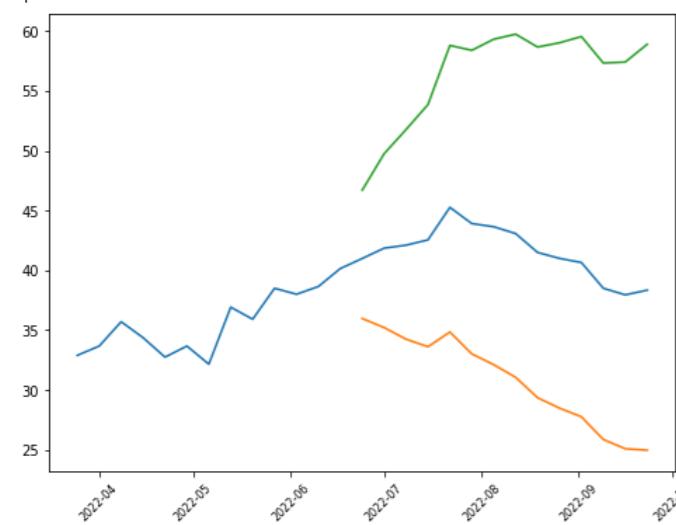
	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
GO	1.191531	40.150002	21744971.289062	0.687007	0.173605	0.403873

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Sector 1YMF: -74.80001831054688
Sector Volume Factor: 1.4135920452708397
Sector Risk Trend Factor: -2.283970024749523
Index 1YMF: -69.05999755859375
Index Volume Factor: 0.5765983741853883
Index Risk Trend Factor: -5.134573474205833



ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'add', True]
best inner cv score, sdev (11 folds): 23.788531206490646 17.28678832661115
test cv mean error, stdev (10 folds): 23.78853331644342 17.286791788688287
sell date: 2022-07-22
expected return: 0.12744091149424003
discounted return: 0.0038768629036818325
quarter return: 1.4275815458507877



```

['options', ('2022-07-15', '2023-01-20', '2024-01-19')]
symbol: HRB
sector: Consumer Cyclical
Index: SP400
vol_30d_2yr: 54249330.46875
Sector 1YMF: 9.64000129699707
1YMF: 9.64000129699707
risk trend factor: 0.73141120475963
    beta currentRatio debtToEquity dividendRate dividendYield \
HRB  0.695099      1.103      5314.905      1.08      0.0327

    earningsGrowth     ebitda ebitdaMargins forwardPE grossMargins \
HRB   -0.008  806428032      0.30238     9.17663      0.472

    grossProfits heldPercentInstitutions           industry marketCap \
HRB  1400058000          0.9316 Personal Services  5389489664

    operatingCashflow operatingMargins payoutRatio pegRatio priceToBook \
HRB  80728000      0.25066      0.3344      0.99  120.17794

    priceToSalesTrailing12Months profitMargins quickRatio revenueGrowth \
HRB            2.020838      0.16063      0.971      0.039

    revenuePerShare           sector sharesOutstanding shortRatio \
HRB        15.645 Consumer Cyclical      159594000      3.1

    totalCash totalCashPerShare totalDebt totalRevenue trailingPE
HRB  1041740032          6.527  2384054016  2666958080  13.817512

    Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper

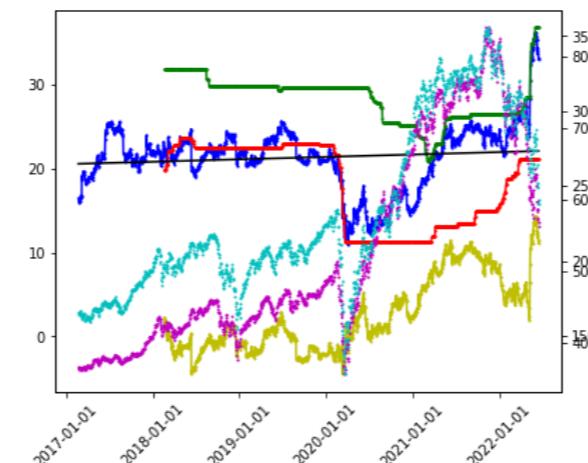
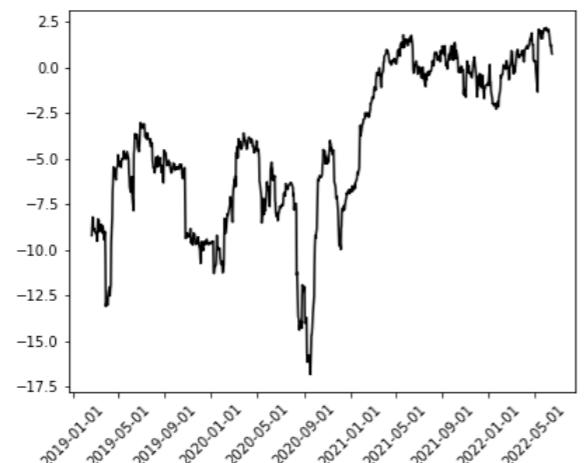
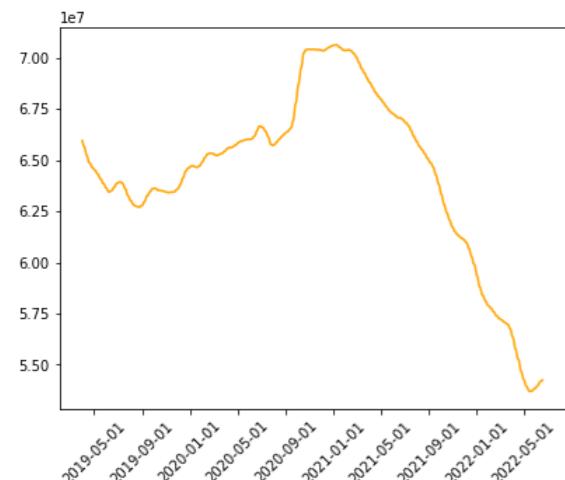
```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	33.0	32.411108	34.624444	36.837781	29.692222	4.042801	21.60662	37.77782

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
HRB	0.963511	33.0	54249330.46875	0.83894	0.727369	0.435637

l axis		r axis
legend		legend
blue	symbol	magenta sector
green	trailing_1yr_max	cyan index
red	trailing_1yr_min	
orange	30d_vol_2yr	
black	risk_trend_factor/linear	

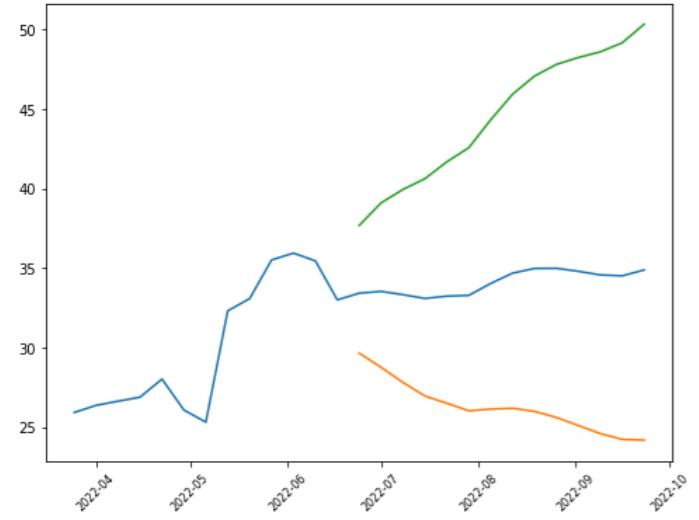
```
yellow      supply_trend_1yr
Sector 1YMF: -359.96002197265625
Sector Volume Factor: 1.2928194874233667
Sector Risk Trend Factor: -4.72140697901556
Index 1YMF: -69.05999755859375
Index Volume Factor: 0.5765983741853883
Index Risk Trend Factor: -5.134573474205833
```



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'add', False]
best inner cv score, sdev (11 folds): 6.864337424310574 6.3615251868214555
test cv mean error, stdev (10 folds): 7.2923108491707485 6.519291705279131
sell date: 2022-08-26
expected return: 0.0601357231412688
discounted return: 0.0008851936835876373
quarter return: 1.0848066800250045

```



```

['options', ('2022-07-15', '2023-01-20', '2024-01-19')]
symbol: AZPN
sector: Technology
Index: SP400
Index: SP400
vol_30d_2yr: 9413646.875
Sector 1YMF: 44.3599853515625
1YMF: 44.3599853515625
risk trend factor: 0.7193120754472356
currentRatio debtToEquity earningsGrowth ebitda ebitdaMargins \
AZPN 1.176 40.561 0.231 27337000 0.08523

```

```

forwardPE grossMargins grossProfits heldPercentInstitutions \
AZPN 34.490196 0.46746 137630000 1.03086

```

```

industry marketCap operatingCashflow operatingMargins \
AZPN Software—Application 12029022208 45755000 -0.08421

```

```

payoutRatio pegRatio priceToBook priceToSalesTrailing12Months \
AZPN 0 4.59 16.632854 37.503967

```

```

profitMargins quickRatio revenueGrowth revenuePerShare sector \
AZPN -0.07406 1.116 0.154 4.811 Technology

```

```

sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
AZPN 62168700 2.78 285216992 4.282 314292000

```

```

totalRevenue
AZPN 32074000

```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDDev	90d lower	90d upper
2022-06-17	189.199997	179.517829	194.02619	208.534551	172.712063	17.04983	138.612402	206.811723

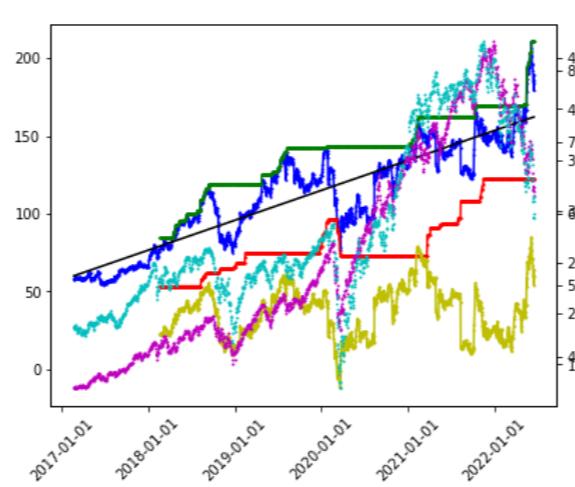
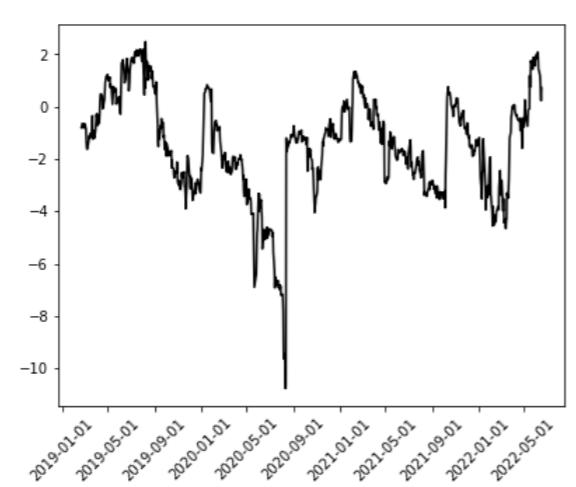
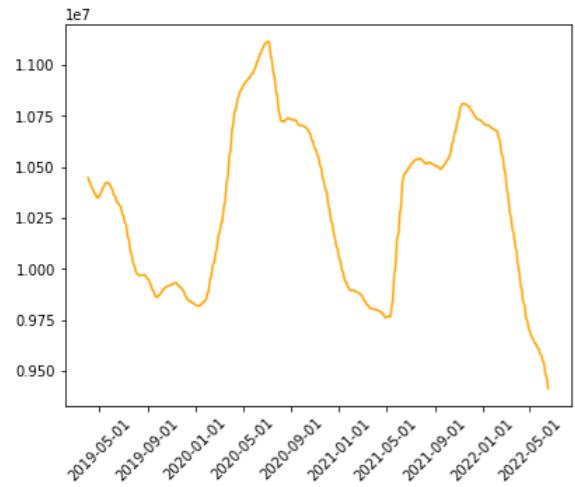
volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
AZPN	0.677612	189.199997	9413646.875	0.817172	0.799656 0.381343

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1y		

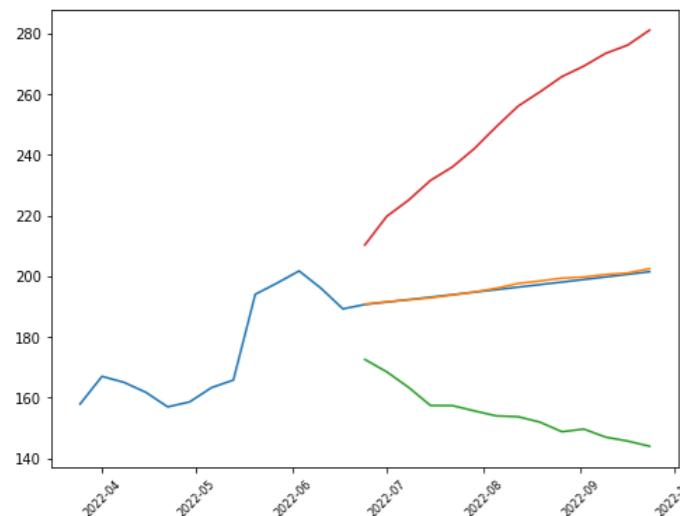
6/22/22, 7:59 AM

AnalyzeSP1500-Backup

Sector 1YMF: -363.4599914550781
Sector Volume Factor: 1.1528457613891094
Sector Risk Trend Factor: -4.954471974241429
Index 1YMF: -69.05999755859375
Index Volume Factor: 0.5765983741853883
Index Risk Trend Factor: -5.134573474205833



ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, 'mul', False]
best inner cv score, sdev (11 folds): 489.4540152755008 509.74593337991774
test cv mean error, stdev (10 folds): 536.2814219985136 511.570564229511
sell date: 2022-09-23
expected return: 0.06468623197866812
discounted return: 0.00066703234477683
quarter return: 1.063267291547647



```
[ 'options', ('2022-07-15', '2022-12-16') ]
symbol: CEIX
sector: Energy
Index: SP600
vol_30d_2yr: 10292389.84375
Sector 1YMF: 13.870006561279297
1YMF: 13.870006561279297
risk trend factor: 0.677246429262603
    beta currentRatio debtToEquity      ebitda ebitdaMargins forwardPE \
CEIX  2.034072      0.842      95.981  241890000      0.16404  2.951821

    freeCashflow grossMargins grossProfits heldPercentInstitutions \
CEIX  252373632      0.3951     422536000      0.82577

    industry marketCap operatingCashflow operatingMargins payoutRatio \
CEIX Thermal Coal  1834375936      375780000      0.01441      0

    priceToBook priceToSalesTrailing12Months profitMargins quickRatio \
CEIX  2.744414      1.244024      0.00221      0.658

    returnOnAssets returnOnEquity revenueGrowth revenuePerShare sector \
CEIX  0.00507      0.0052      0.616      42.718 Energy

    sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
CEIX  34814500      2.05  222906000      6.403  641545984

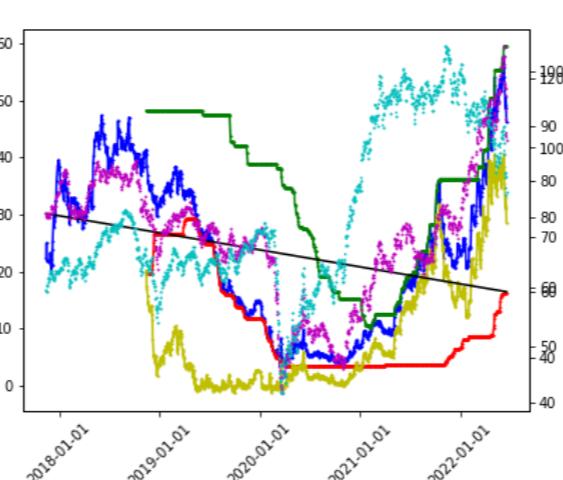
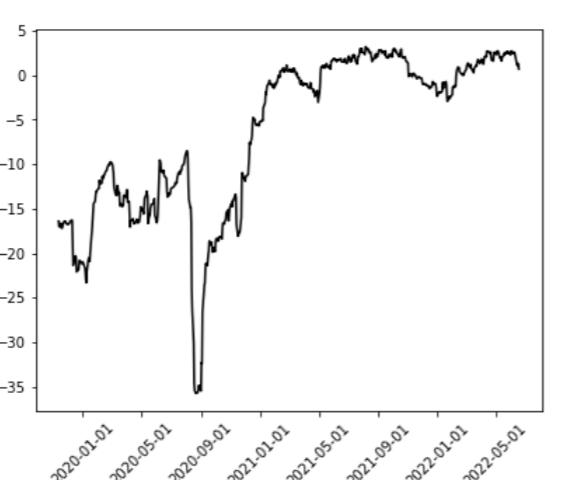
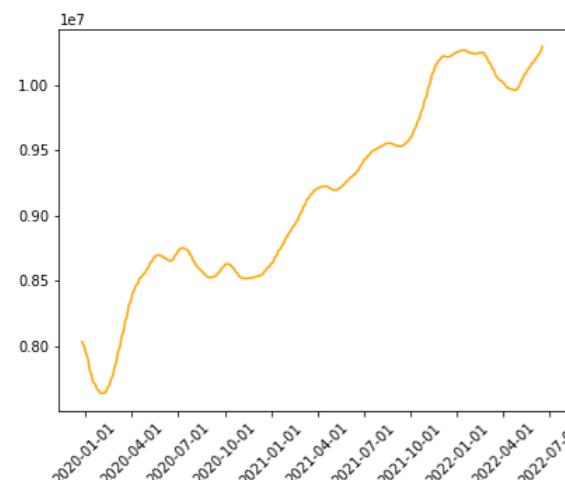
    totalRevenue trailingPE
CEIX  1474550016  585.4444

Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSD 90d_lower 90d_upper
2022-06-17 46.150002 47.268535 52.341873 57.415211 46.69127 6.413974 33.863321 59.519218
```

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
CEIX	1.548727	46.150002	10292389.84375	0.762563	0.855686	0.521917

	l axis	r axis
blue	symbol	magenta sector
green	trailing_1yr_max	cyan index
red	trailing_1yr_min	
orange	30d_vol_2yr	
black	risk_trend_factor/linear	
yellow	supply_trend_1yr	

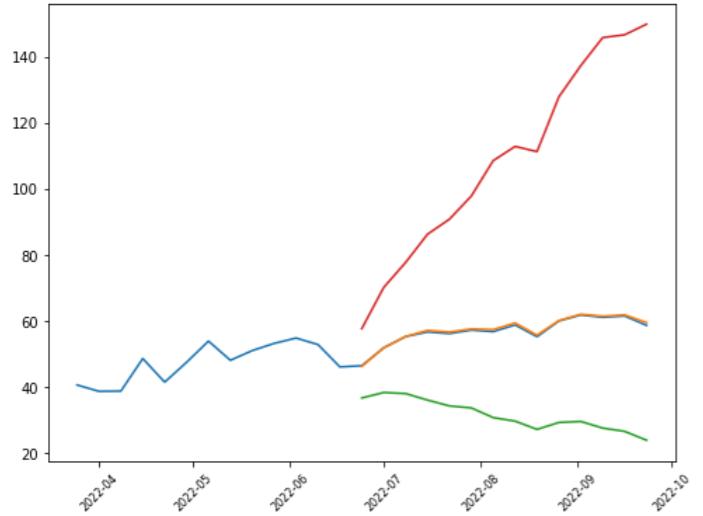
Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'mul', True]
best inner cv score, sdev (11 folds): 36.226316448100064 60.30280626318781
test cv mean error, stdev (10 folds): 36.226316729288946 60.302806152572394
sell date: 2022-09-02
expected return: 0.34048576634947886
discounted return: 0.00402220525688235
quarter return: 1.446722537299144

```



```

['options', ('2022-08-19',)]
symbol: PSB
sector: Real Estate
Index: SP400
vol_30d_2yr: 2723370.8984375
Sector 1YMF: 12.849990844726562
1YMF: 12.849990844726562
risk trend factor: 0.576750069513787
      beta currentRatio debtToEquity dividendRate dividendYield \
PSB  0.581372      1.073      1.67       4.2      0.0225

```

```

earningsGrowth      ebitda ebitdaMargins forwardPE freeCashflow \
PSB      8.958  285950016      0.65181     46.5   274362240

```

```

grossMargins grossProfits heldPercentInstitutions      industry \
PSB      0.70163  307807000      0.72444 REIT-Diversified

```

```

marketCap operatingCashflow operatingMargins payoutRatio priceToBook \
PSB  5124411392      302236992      0.44509     0.2657    5.994199

```

```

priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
PSB      11.680821      1.02292      0.712      0.05838

```

```

returnOnEquity revenueGrowth revenuePerShare      sector \
PSB      0.27862      0.055      15.933 Real Estate

```

```

sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
PSB      27550600      1.05   27074000      0.981  33300000

```

```

totalRevenue trailingPE
PSB      438703008      33.68955

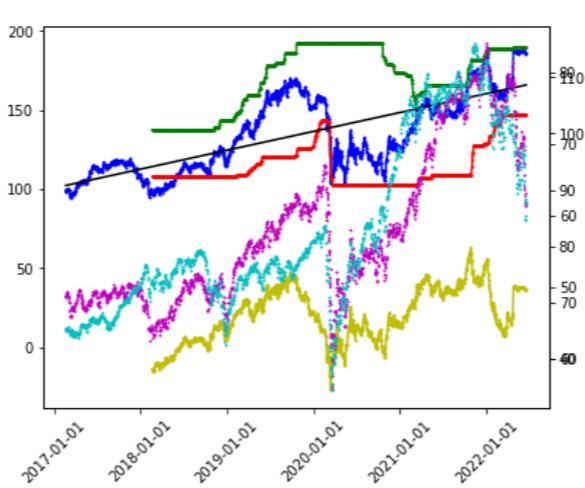
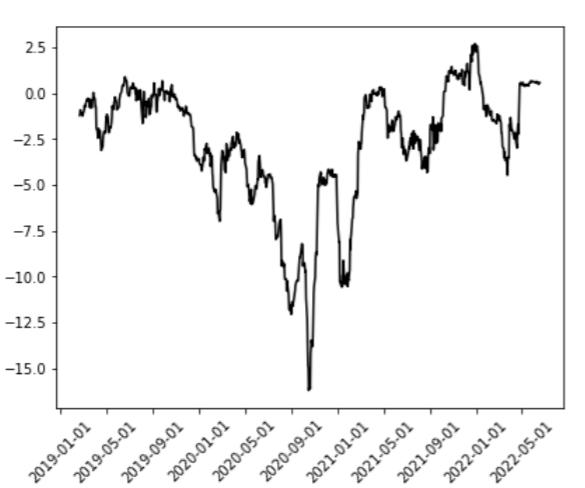
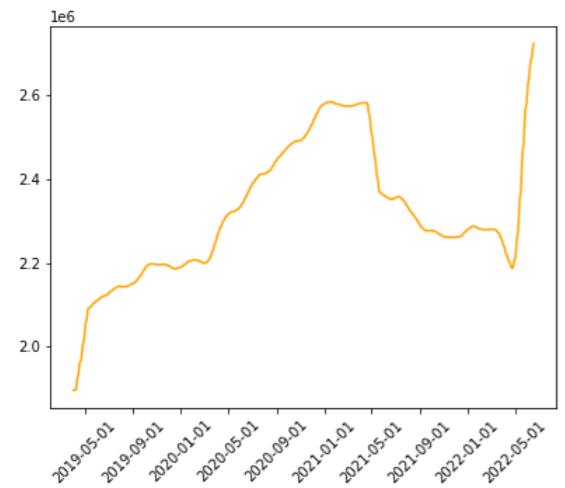
```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSD	90d_lower	90d_upper
2022-06-17	185.919998	185.768052	186.94873	188.129409	178.972222	10.487853	157.996517	199.947928

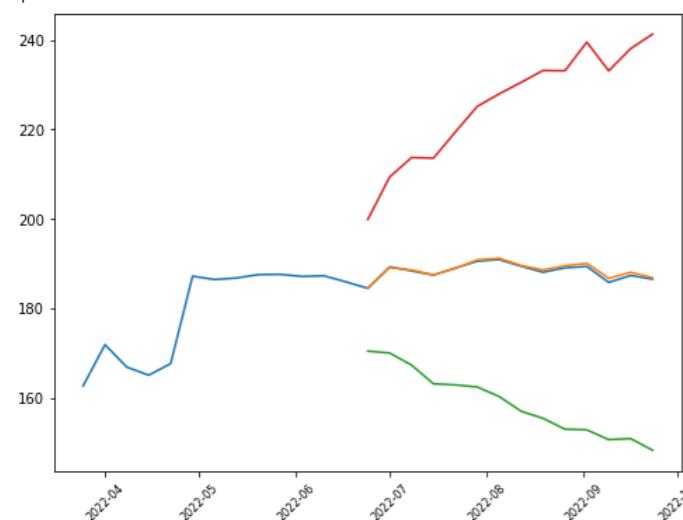
	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
PSB	2.540601	185.919998	2723370.898438	0.951471	0.807252	0.477207

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Sector 1YMF: -76.09000396728516
Sector Volume Factor: 1.2315342134094496
Sector Risk Trend Factor: -3.053370235265123
Index 1YMF: -69.05999755859375
Index Volume Factor: 0.5765983741853883
Index Risk Trend Factor: -5.134573474205833



ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['mul', 'mul', True]
best inner cv score, sdev (11 folds): 381.81864448969196 513.263970465507
test cv mean error, stdev (10 folds): 419.11976982172064 523.9072293262651
sell date: 2022-08-05
expected return: 0.026834168475597543
discounted return: 0.0005886275315052369
quarter return: 1.0556300589694985



```
[{'quarterly_balance_sheet', 2021-12-31 2021-09-30 2021-06-30 \
Intangible Assets 6.600000e+06 7.200000e+06 4.900000e+06
Capital Surplus 7.524440e+08 7.410320e+08 7.393360e+08
Total Liab 1.291510e+08 9.920800e+07 8.898900e+07
Total Stockholder Equity 9.794560e+08 8.547510e+08 8.294110e+08
Minority Interest 2.596150e+08 2.297690e+08 2.233740e+08
Deferred Long Term Liab 2.100000e+06 2.200000e+06 1.000000e+05
Total Assets 2.123222e+09 2.128478e+09 2.086524e+09
Common Stock 2.750000e+05 2.750000e+05 2.750000e+05
Other Current Assets 3.360900e+07 4.681100e+07 1.287100e+07
Retained Earnings 2.267370e+08 1.134440e+08 8.980000e+07
Other Liab 2.800000e+06 1.200000e+06 1.900000e+06
Other Assets 8.675200e+07 7.275800e+07 6.139400e+07
Cash 2.707400e+07 4.659400e+07 1.159650e+08
Total Current Liabilities 9.305100e+07 9.668800e+07 8.568900e+07
Property Plant Equipment 1.929985e+09 1.915610e+09 1.851902e+09
Total Current Assets 9.988500e+07 1.329100e+08 1.683280e+08
Net Tangible Assets 9.728560e+08 8.475510e+08 8.245110e+08
Net Receivables 3.920200e+07 3.950500e+07 3.949200e+07
Long Term Debt 3.200000e+07 NaN NaN

2021-03-31
Intangible Assets 5.700000e+06
Capital Surplus 7.363360e+08
Total Liab 8.292500e+07
Total Stockholder Equity 8.094190e+08
Minority Interest 2.188450e+08
Deferred Long Term Liab 2.000000e+05
Total Assets 2.055939e+09
Common Stock 2.740000e+05
Other Current Assets 2.569800e+07
Retained Earnings 7.280900e+07
Other Liab 2.000000e+06
Other Assets 5.048600e+07
Cash 6.949200e+07
Total Current Liabilities 7.952500e+07
Property Plant Equipment 1.863881e+09
Total Current Assets 1.358720e+08
Net Tangible Assets 8.037190e+08
Net Receivables 4.068200e+07
Long Term Debt NaN ]
['quarterly_cashflow', 2021-12-31 2021-09-30 \
Change To Liabilities 0.0 0.0
Total Cashflows From Investing Activities 272954000.0 -182263000.0
Net Borrowings 32000000.0 32000000.0
Total Cash From Financing Activities -362303000.0 -51409000.0
Issuance Of Stock 4105000.0 4105000.0
Net Income 286094000.0 64613000.0
Change In Cash -19520000.0 -69371000.0
Repurchase Of Stock -1213000.0 -657000.0
Total Cash From Operating Activities 69829000.0 84301000.0
Depreciation 23273000.0 23404000.0
Dividends Paid -39556000.0 -40969000.0
Other Cashflows From Financing Activities -41078000.0 -9783000.0
Change To Netincome -239795000.0 -3912000.0

2021-06-30 2021-03-31
Change To Liabilities 0.0 0.0
Total Cashflows From Investing Activities 15099000.0 -16424000.0
Net Borrowings 32000000.0 32000000.0
Total Cash From Financing Activities -47909000.0 -51991000.0
Issuance Of Stock 907000.0 907000.0
Net Income 57956000.0 40096000.0
Change In Cash 46473000.0 409000.0
Repurchase Of Stock -207000.0 -3361000.0
Total Cash From Operating Activities 79283000.0 68824000.0
Depreciation 22331000.0 21678000.0
Dividends Paid -40965000.0 -40918000.0
Other Cashflows From Financing Activities -7644000.0 -7712000.0
Change To Netincome -1140000.0 6914000.0 ]
['quarterly_earnings', Revenue Earnings
Quarter
1Q2021 108047000 40096000
2Q2021 109364000 57956000
3Q2021 110448000 64613000
4Q2021 110844000 286094000]
['quarterly_financials', 2021-12-31 2021-09-30 2021-06-30 \
Research Development None None None
Effect Of Accounting Charges None None None
Income Before Tax 357009000.0 78463000.0 7005000.0
Minority Interest 259615000.0 229769000.0 223374000.0
Net Income 286094000.0 64613000.0 57956000.0
Selling General Administrative 4728000.0 5148000.0 4799000.0
Gross Profit 78106000.0 77357000.0 77515000.0
Ebit 49248000.0 48352000.0 50202000.0
Operating Income 49248000.0 48352000.0 50202000.0
```

Other Operating Expenses	None	None	None
Interest Expense	-3943000.0	-224000.0	-268000.0
Extraordinary Items	None	None	None
Non Recurring	None	None	None
Other Items	None	None	None
Income Tax Expense	0.0	0.0	0.0
Total Revenue	110844000.0	110448000.0	109364000.0
Total Operating Expenses	61596000.0	62096000.0	59162000.0
Cost Of Revenue	32738000.0	33091000.0	31849000.0
Total Other Income Expense Net	307761000.0	30111000.0	19848000.0
Discontinued Operations	None	None	None
Net Income From Continuing Ops	357009000.0	78463000.0	70050000.0
Net Income Applicable To Common Shares	267390000.0	52217000.0	45595000.0

2021-03-31

Research Development	None
Effect Of Accounting Charges	None
Income Before Tax	47507000.0
Minority Interest	218845000.0
Net Income	40096000.0
Selling General Administrative	4382000.0
Gross Profit	74829000.0
Ebit	47462000.0
Operating Income	47462000.0
Other Operating Expenses	None
Interest Expense	-211000.0
Extraordinary Items	None
Non Recurring	None
Other Items	None
Income Tax Expense	0.0
Total Revenue	108047000.0
Total Operating Expenses	60585000.0
Cost Of Revenue	33218000.0
Total Other Income Expense Net	45000.0
Discontinued Operations	None
Net Income From Continuing Ops	47507000.0
Net Income Applicable To Common Shares	27886000.0

	Holder	Shares	Date Reported	% Out	\
0	Vanguard Specialized-Real Estate Index Fund	985864	2022-01-30	0.0357	
1	Vanguard Explorer Fund, Inc.	711188	2022-01-30	0.0257	
2	Principal Real Estate Securities Fund	616247	2022-01-30	0.0223	
3	Vanguard Total Stock Market Index Fund	586018	2021-12-30	0.0212	
4	iShares Core S&P Midcap ETF	558903	2022-01-30	0.0202	
5	Vanguard Small-Cap Index Fund	520016	2021-12-30	0.0188	
6	Price (T.Rowe) Small Cap Stock Fund	488574	2021-12-30	0.0177	
7	Price (T.Rowe) Small-Cap Value Fund	487200	2021-12-30	0.0176	
8	iShares Russell 2000 ETF	461507	2022-01-30	0.0167	
9	Vanguard Small-Cap Growth Index Fund	324161	2021-12-30	0.0117	

Value

0	164599853
1	118739948
2	102888599
3	107926935
4	93314444
5	95771346
6	89980673
7	89727624
8	77053208
9	59700731

symbol: MCK
sector: Healthcare

Index: SP500

vol_30d_2yr: 22868822.0703125

Sector 1YMF: 23.670013427734375

1YMF: 23.670013427734375

risk trend factor: 0.5738185073390152

beta	currentRatio	dividendRate	dividendYield	ebitda	\
MCK	0.716666	0.98	1.88	0.0058	3516999936

ebitdaMargins	forwardPE	freeCashflow	grossMargins	grossProfits	\
MCK	0.01368	14.043577	2778374912	0.0503	11967000000

heldPercentInstitutions	industry	marketCap	\
MCK	0.898	Medical Distribution	47236759552

operatingCashflow	operatingMargins	payoutRatio	pegRatio	\
MCK	4917000192	0.0105	0.2521	1.05

priceToSalesTrailing12Months	profitMargins	quickRatio	returnOnAssets	\
MCK	0.183796	0.00549	0.445	0.02686

returnOnEquity	revenueGrowth	revenuePerShare	sector	\
MCK	14.01754	0.096	1655.966	Healthcare

sharesOutstanding	shortRatio	totalCash	totalCashPerShare	totalDebt	\
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MCK	152682000	2.69	2753999872	18.385	8098999808
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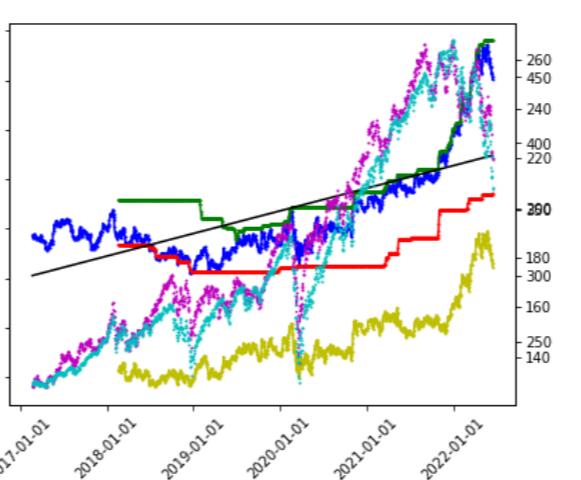
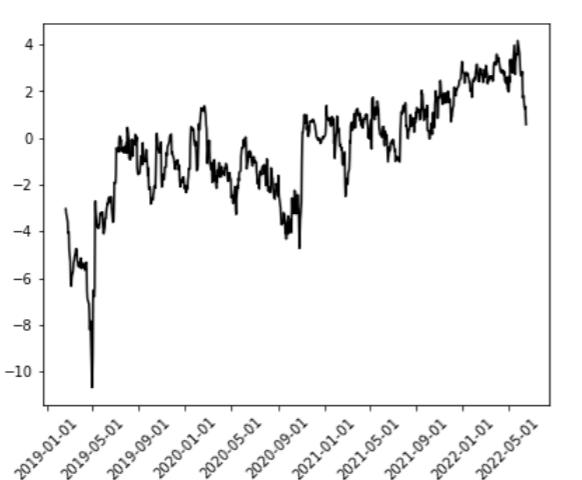
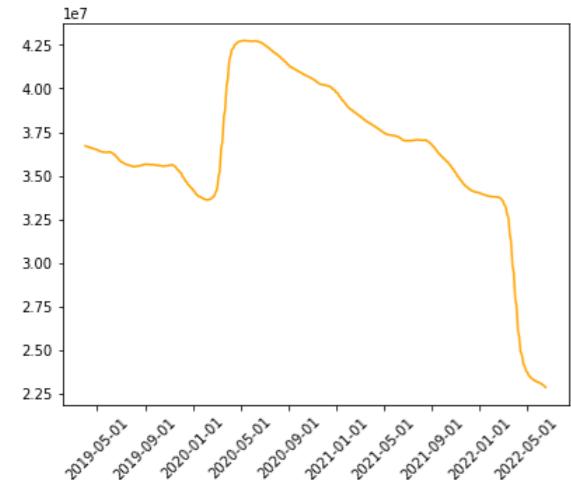
totalRevenue
MCK 257005993984

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	300.570007	299.443248	318.421081	337.398913	317.445859	10.066372	297.313115	337.578604

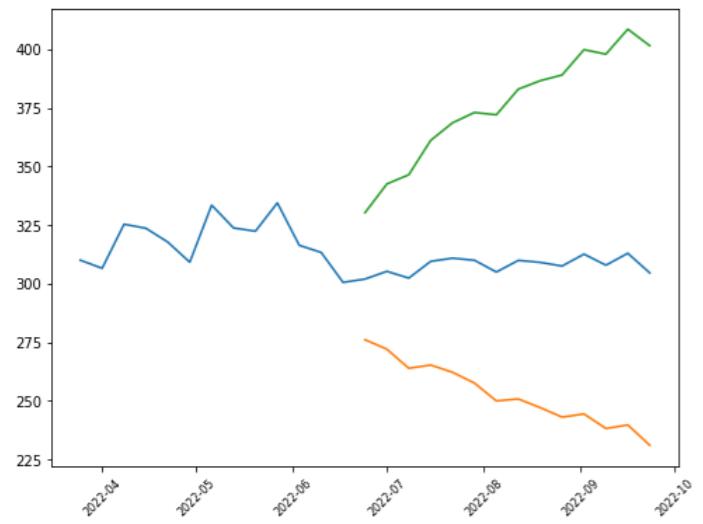
volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst	
MCK	1.048139	300.570007	22868822.070312	0.803327	0.997242	0.461301

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Sector 1YMF: -122.20997619628906
Sector Volume Factor: 1.2238851152317325
Sector Risk Trend Factor: -3.3236323632363236
Index 1YMF: -287.8400573730469
Index Volume Factor: 1.1835166983613057
Index Risk Trend Factor: -3.791860877423899



ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'add', True]
best inner cv score, sdev (11 folds): 416.29615906098445 356.83704046212785
test cv mean error, stdev (10 folds): 436.7456044880313 368.0570102434348
sell date: 2022-09-16
expected return: 0.04130793003929322
discounted return: 0.0004653674227454996
quarter return: 1.043733140155085



```
[ 'quarterly_balance_sheet', 2021-12-31 2021-09-30 2021-06-30 \
Intangible Assets 2.130000e+09 2.385000e+09 2.797000e+09
Capital Surplus 7.411000e+09 7.311000e+09 7.057000e+09
Total Liab 6.449500e+10 6.368800e+10 6.293200e+10
Total Stockholder Equity -1.274000e+09 -5.710000e+08 -5.290000e+08
Minority Interest 4.870000e+08 4.840000e+08 4.910000e+08
Other Current Liab 5.975000e+09 3.504000e+09 6.850000e+08
Total Assets 6.370800e+10 6.360100e+10 6.289400e+10
Common Stock 2.000000e+06 2.000000e+06 2.000000e+06
Other Current Assets 5.940000e+09 3.470000e+09 1.230000e+08
Retained Earnings 8.734000e+09 8.812000e+09 8.618000e+09
Other Liab 1.007600e+10 9.988000e+09 1.065700e+10
Good Will 9.462000e+09 9.473000e+09 9.520000e+09
Treasury Stock -1.742100e+10 -1.669600e+10 -1.620600e+10
Other Assets 1.971000e+09 2.173000e+09 2.607000e+09
Cash 2.754000e+09 2.151000e+09 2.423000e+09
Total Current Liabilities 4.745200e+10 4.607500e+10 4.383500e+10
Short Long Term Debt 4.660000e+08 7.500000e+07 8.070000e+08
Other Stockholder Equity -1.655000e+09 -1.665000e+09 -1.627000e+09
Property Plant Equipment 3.645000e+09 3.990000e+09 4.620000e+09
Total Current Assets 4.649800e+10 4.558000e+10 4.335000e+10
Long Term Investments 2.000000e+06 NaN NaN
Net Tangible Assets -1.286600e+10 -1.242900e+10 -1.284600e+10
Net Receivables 1.835500e+10 2.014000e+10 2.019800e+10
Long Term Debt 5.323000e+09 5.769000e+09 6.282000e+09
Inventory 1.902400e+10 1.934200e+10 2.001600e+10
Accounts Payable 3.718300e+10 3.892200e+10 3.838900e+10
```

```
2021-03-31
```

```
Intangible Assets 3.391000e+09
Capital Surplus 6.925000e+09
Total Liab 6.356900e+10
Total Stockholder Equity -2.100000e+07
Minority Interest 1.467000e+09
Other Current Liab 1.670000e+08
Total Assets 6.501500e+10
Common Stock 2.000000e+06
Other Current Assets 1.340000e+08
Retained Earnings 8.202000e+09
Other Liab 1.110100e+10
Good Will 9.493000e+09
Treasury Stock -1.515000e+10
Other Assets 1.799000e+09
Cash 6.278000e+09
Total Current Liabilities 4.410300e+10
Short Long Term Debt 7.740000e+08
Other Stockholder Equity -1.480000e+09
Property Plant Equipment 4.681000e+09
Total Current Assets 4.538200e+10
Long Term Investments 2.690000e+08
Net Tangible Assets -1.290500e+10
Net Receivables 1.918100e+10
Long Term Debt 6.292000e+09
Inventory 1.924600e+10
Accounts Payable 3.897500e+10 ]
```

```
2021-12-31 2021-09-30 \
```

```
[ 'quarterly_cashflow', 2021-12-31 2021-09-30 \
Change To Liabilities 1.810000e+08 2.040000e+09
Total Cashflows From Investing Activities -1.150000e+08 -5.800000e+07
Net Borrowings 3.620000e+08 -1.136000e+09
Total Cash From Financing Activities -4.380000e+08 -1.743000e+09
Change To Operating Activities 3.300000e+07 1.300000e+08
Issuance Of Stock 6.300000e+07 4.000000e+07
Net Income -7.000000e+06 2.670000e+08
Change In Cash 6.260000e+08 -2.000000e+06
Repurchase Of Stock -7.140000e+08 -2.640000e+08
Effect Of Exchange Rate 1.700000e+07 7.000000e+06
Total Cash From Operating Activities 1.377000e+09 1.792000e+09
Depreciation 1.850000e+08 1.950000e+08
Other Cashflows From Investing Activities -3.000000e+07 -3.100000e+07
Dividends Paid -7.200000e+07 -6.500000e+07
Change To Inventory -4.950000e+08 -2.630000e+08
Change To Account Receivables 3.860000e+08 -1.266000e+09
Other Cashflows From Financing Activities -7.700000e+07 -3.180000e+08
Change To Netincome 9.580000e+08 5.950000e+08
Capital Expenditures -6.700000e+07 -9.300000e+07
```

```
2021-06-30 2021-03-31
```

```
Change To Liabilities -6.090000e+08 2.507000e+09
Total Cashflows From Investing Activities -9.900000e+07 -2.050000e+08
Net Borrowings -2.000000e+08 -1.620000e+08
Total Cash From Financing Activities -2.151000e+09 -5.170000e+08
Change To Operating Activities -1.650000e+08 3.700000e+07
Issuance Of Stock 7.100000e+07 3.700000e+07
Net Income 4.860000e+08 6.660000e+08
Change In Cash -3.861000e+09 2.664000e+09
Repurchase Of Stock -1.008000e+09 -2.440000e+08
```

	Revenue	Earnings
Quarter		
1Q2021	59142000000	6660000000
2Q2021	62674000000	486000000
3Q2021	66576000000	267000000
4Q2021	68614000000	-7000000]

	2021-12-31	2021-09-30	\
['quarterly_financials',			
Research Development	None	None	
Effect Of Accounting Charges	None	None	
Income Before Tax	277000000.0	442000000.0	
Minority Interest	487000000.0	484000000.0	
Net Income	-7000000.0	267000000.0	
Selling General Administrative	3105000000.0	2669000000.0	
Gross Profit	3428000000.0	3352000000.0	
Ebit	323000000.0	683000000.0	
Operating Income	323000000.0	683000000.0	
Other Operating Expenses	None	None	
Interest Expense	-41000000.0	-45000000.0	
Extraordinary Items	None	None	
Non Recurring	None	None	
Other Items	None	None	
Income Tax Expense	238000000.0	132000000.0	
Total Revenue	68614000000.0	66576000000.0	
Total Operating Expenses	68291000000.0	65893000000.0	
Cost Of Revenue	65186000000.0	63224000000.0	
Total Other Income Expense Net	-46000000.0	-24100000.0	
Discontinued Operations	NaN	NaN	
Net Income From Continuing Ops	39000000.0	310000000.0	
Net Income Applicable To Common Shares	-7000000.0	267000000.0	

	2021-06-30	2021-03-31
Research Development	None	None
Effect Of Accounting Charges	None	None
Income Before Tax	562000000.0	1829000000.0
Minority Interest	491000000.0	1467000000.0
Net Income	486000000.0	666000000.0
Selling General Administrative	2232000000.0	2224000000.0
Gross Profit	3032000000.0	3116000000.0
Ebit	800000000.0	892000000.0
Operating Income	800000000.0	892000000.0
Other Operating Expenses	None	None
Interest Expense	-49000000.0	-52000000.0
Extraordinary Items	None	None
Non Recurring	None	None
Other Items	None	None
Income Tax Expense	26000000.0	316000000.0
Total Revenue	62674000000.0	59142000000.0
Total Operating Expenses	61874000000.0	58250000000.0
Cost Of Revenue	59642000000.0	56026000000.0
Total Other Income Expense Net	-238000000.0	137000000.0
Discontinued Operations	-3000000.0	-3000000.0
Net Income From Continuing Ops	536000000.0	713000000.0
Net Income Applicable To Common Shares	486000000.0	666000000.0

	Holder	Shares	Date Reported	% Out	\
0	Vanguard Total Stock Market Index Fund	4329453	2021-12-30	0.0298	
1	Vanguard 500 Index Fund	3233507	2021-12-30	0.0222	
2	MFS Series Trust I-MFS Value Fund	2893200	2022-02-27	0.0199	
3	JP Morgan Large Cap Growth Fund	2293009	2021-12-30	0.0158	
4	Vanguard Mid-Cap Index Fund	1726299	2021-12-30	0.0119	
5	SPDR S&P 500 ETF Trust	1640864	2022-01-30	0.0113	
6	Fidelity 500 Index Fund	1563585	2022-02-27	0.0108	
7	iShares Core S&P 500 ETF	1269846	2022-01-30	0.0087	
8	Putnam Large Cap Value Fund	1220237	2022-01-30	0.0084	
9	Vanguard Index-Value Index Fund	1166709	2021-12-30	0.0080	

	Value
0	1076172132
1	803752834
2	795514272
3	569973247
4	429106142
5	421242606
6	429923331
7	325994865
8	313259242
9	290008856

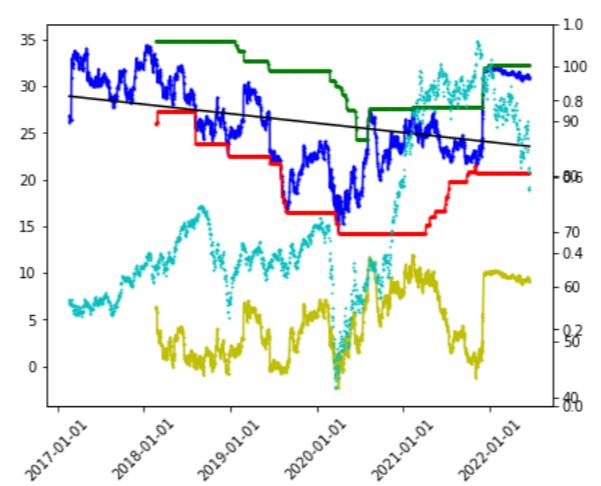
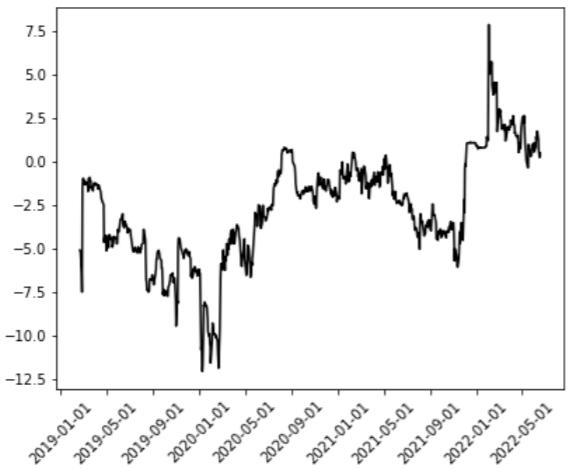
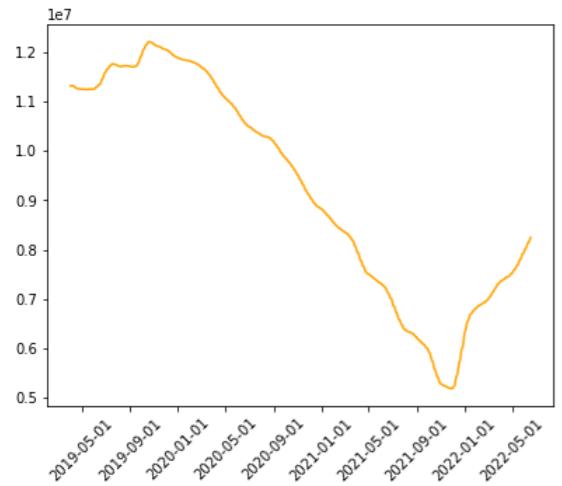
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['sustainability', Value
2022-5
palmoil False
controversialWeapons False
gambling False
socialScore 7.37
nuclear False
furLeather False
alcoholic False
gmo False
catholic False
socialPercentile 0
peerCount 58
governanceScore 5.52
environmentPercentile 0
animalTesting False
tobacco False
totalEsg 15.17
highestControversy 3
esgPerformance LAG_PERF
coal False
pesticides False
adult False
percentile 10.18
peerGroup Healthcare
smallArms False
environmentScore 2.29
governancePercentile 0
militaryContract False]
symbol: GCP
sector: error
sector: error
Index: SP600
vol_30d_2yr: 8243886.328125
Sector 1YMF: 0.45000267028808594
1YMF: 0.45000267028808594
risk trend factor: 0.5027960224875223
Empty DataFrame
Columns: []
Index: [GCP]
```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	30.93	30.835356	31.038381	31.241406	31.187778	0.232375	30.723027	31.652528

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
GCP	1.87078	30.93	8243886.328125	0.913628	0.155232	0.442804

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

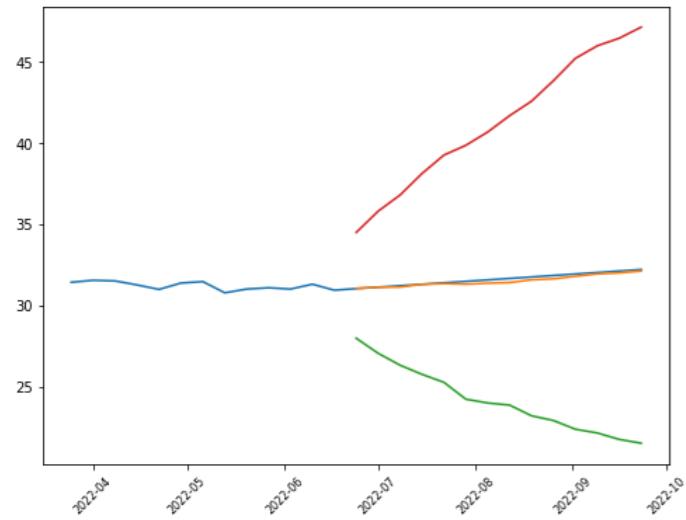
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592



```

inner cv scores:
best model: [None, 'mul', False]
best inner cv score, sdev (11 folds): 8.240075910092076 9.316800391694377
test cv mean error, stdev (10 folds): 8.753590728113855 9.621973515859423
sell date: 2022-09-23
expected return: 0.04120132253026541
discounted return: 0.00042961528306939556
quarter return: 1.0403072667197417

```



```
[ 'options', ('2022-08-19', '2022-12-16') ]
symbol: WRB
sector: Financial Services
Index: SP500
vol_30d_2yr: 24741280.6640625
Sector 1YMF: 2.7066688537597656
1YMF: 2.7066688537597656
risk trend factor: 0.37488481940951457
    beta currentRatio debtToEquity dividendRate dividendYield \
WRB  0.736388     0.453      44.413      0.4      0.006

earningsGrowth      ebitda ebitdaMargins forwardPE freeCashflow \
WRB      1.585 1969144064      0.19279 14.39872 2491864832

grossMargins grossProfits heldPercentInstitutions \
WRB  0.44661 4029355000      0.69595

industry      marketCap operatingCashflow \
WRB Insurance--Property & Casualty 17908482048      2350679040

operatingMargins payoutRatio pegRatio priceToBook \
WRB  0.18096      0.07      1.93      2.608746

priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
WRB  1.753326      0.13546      0.278      0.03724

returnOnEquity revenueGrowth revenuePerShare      sector \
WRB  0.20909      0.352      36.85 Financial Services

sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
WRB  265192992      1.31 3303750912      12.458 3059073024

totalRevenue trailingPE
WRB 10214005760 13.636913
```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	66.82	65.019435	68.896032	72.772628	67.946191	1.725853	64.494485	71.397896

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
WRB	1.220256	66.82	24741280.664062	0.845794	0.942554

I axis r axis

legend	legend
blue symbol	magenta sector
green trailing_1yr_max	cyan index

red trailing_1yr_min

orange 30d_vol_2yr

black risk_trend_factor/linear

yellow supply_trend_1yr

Sector 1YMF: -72.2699966430664

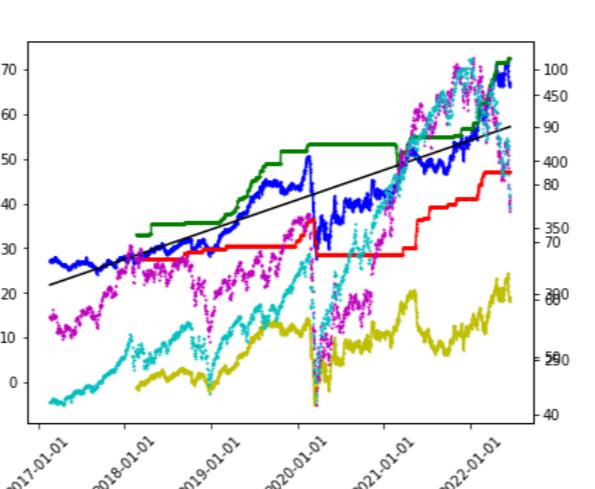
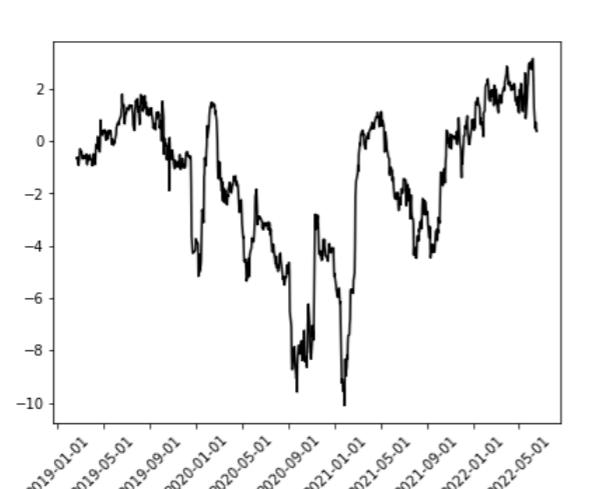
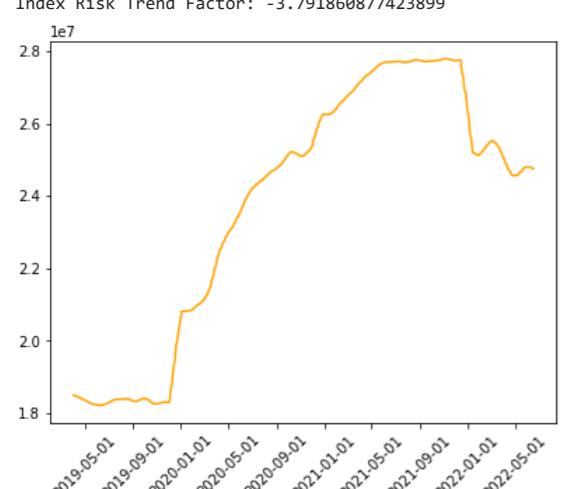
Sector Volume Factor: 1.2707168073107045

Sector Risk Trend Factor: -4.617890709055871

Index 1YMF: -287.8400573730469

Index Volume Factor: 1.1835166983613057

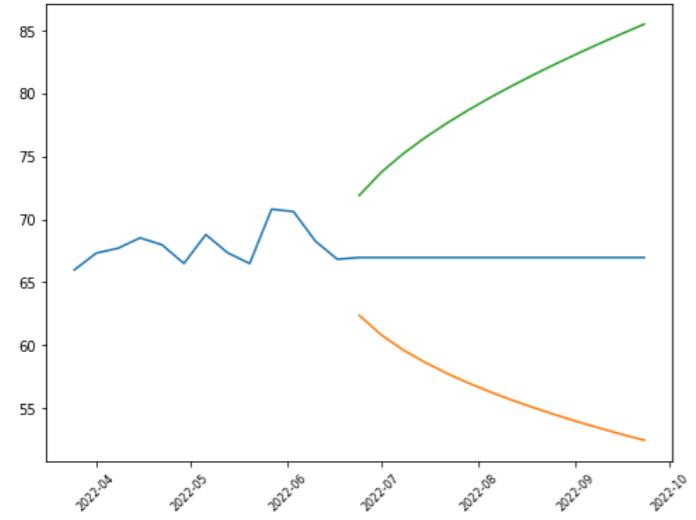
Index Risk Trend Factor: -3.791860877423899



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, None]
best inner cv score, sdev (11 folds): 34.12905580169824 62.70947459193601
test cv mean error, stdev (10 folds): 37.07787196508725 65.03902935573554
sell date: 2022-06-24
expected return: 0.002130974917643359
discounted return: 0.0007098210074716338
quarter return: 1.0674582622266082

```



```

['options', ('2022-07-15',)]
['sustainability', Value
2022-5

```

```

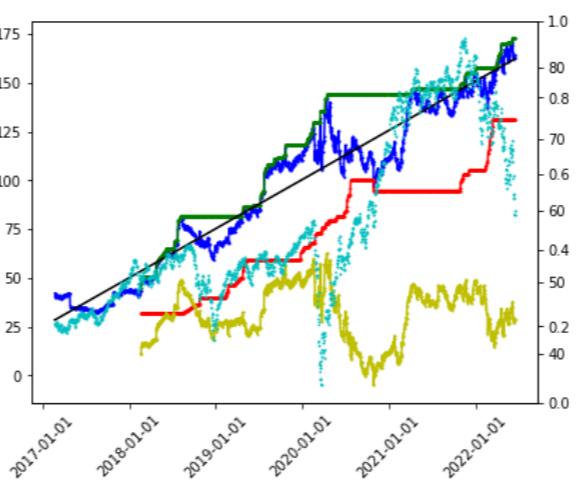
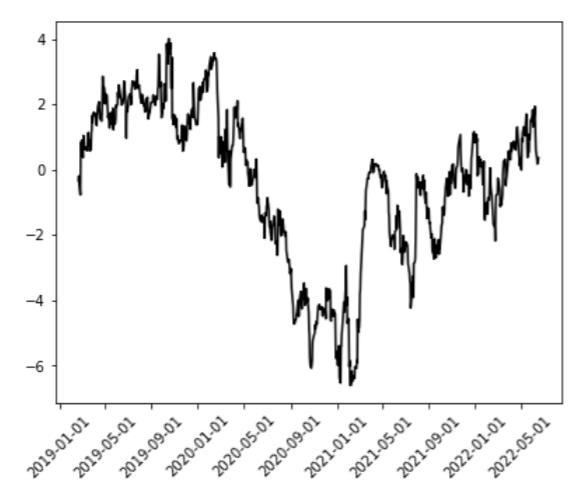
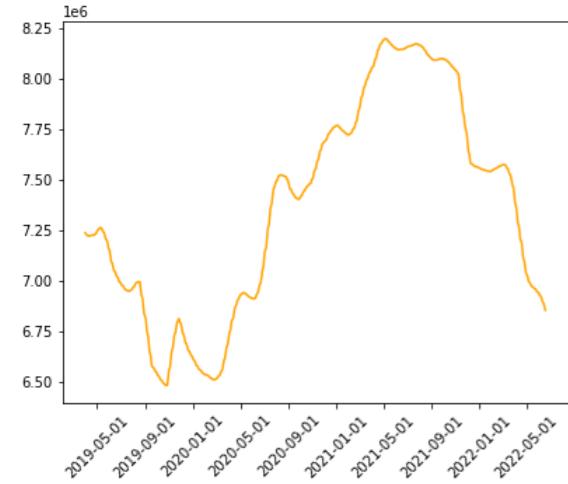
palmoil      False
controversialWeapons  False
gambling     False
socialScore   7.83
nuclear       False
furLeather    False
alcoholic     False
gmo          False
catholic     False
socialPercentile  None
peerCount    96
governanceScore 12.16
environmentPercentile  None
animalTesting  False
tobacco       False
totalEsg     21.95
highestControversy 1
esgPerformance AVG_PERF
coal          False
pesticides    False
adult         False
percentile    31.22
peerGroup     Insurance
smallArms     False
environmentScore 1.95
governancePercentile  None
militaryContract False]
symbol: FCN
sector: error
sector: error
Index: SP400
vol_30d_2yr: 6853053.3203125
Sector 1YMF: 6.7500152587890625
1YMF: 6.7500152587890625
risk trend factor: 0.3590433065465876
Empty DataFrame
Columns: []
Index: [FCN]
```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	164.020004	159.077845	165.278412	171.47898	162.282857	5.027495	152.227867	172.337847

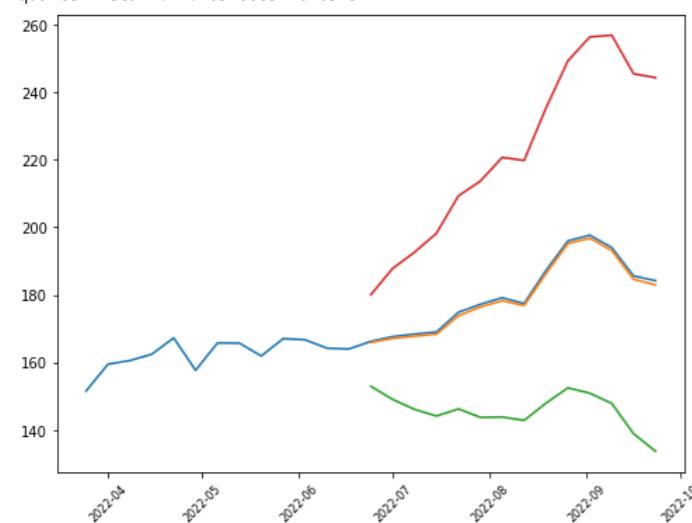
	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
FCN	0.694756	164.020004	6853053.320312	0.888589	0.922824	0.404937

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Index 1YMF: -69.05999755859375
 Index Volume Factor: 0.5765983741853883
 Index Risk Trend Factor: -5.134573474205833



```
ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['mul', 'mul', False]
best inner cv score, sdev (11 folds): 113.70673887274337 46.52872638178013
test cv mean error, stdev (10 folds): 109.63914279747492 46.89789656306262
sell date: 2022-09-02
expected return: 0.20527261998026444
discounted return: 0.002560886935535134
quarter return: 1.2652888519690373
```



```

symbol: XOM
sector: Energy
Index: SP500
vol_30d_2yr: 552640281.25
Sector 1YMF: 9.1300048828125
1YMF: 9.1300048828125
risk trend factor: 0.34741268291096833
    beta currentRatio debtToEquity dividendRate dividendYield \
XOM 1.040834      1.072      26.929      3.52      0.0409

    earningsGrowth      ebitda ebitdaMargins forwardPE freeCashflow \
XOM 1.003 53895000064 0.17427 10.153163 31484874752

    grossMargins grossProfits heldPercentInstitutions industry \
XOM 0.31806 90045000000 0.56852 Oil & Gas Integrated

    marketCap operatingCashflow operatingMargins payoutRatio pegRatio \
XOM 385423540224 53653000192 0.10859 0.5804 0.32

    priceToBook priceToSalesTrailing12Months profitMargins quickRatio \
XOM 2.277378 1.246241 0.08339 0.739

    returnOnAssets returnOnEquity revenueGrowth revenuePerShare sector \
XOM 0.06097 0.1559 0.525 72.369 Energy

    sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
XOM 4213199872 1.61 11073999872 2.629 47537000448

    totalRevenue trailingPE
XOM 309269004288 15.170813

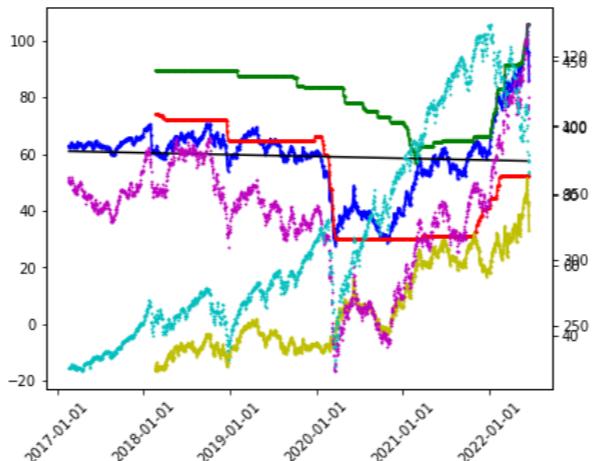
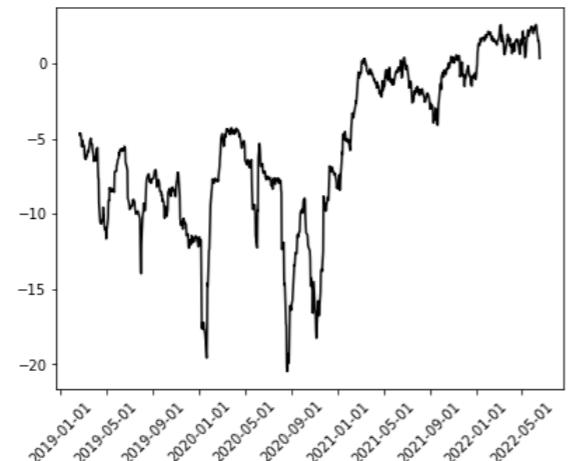
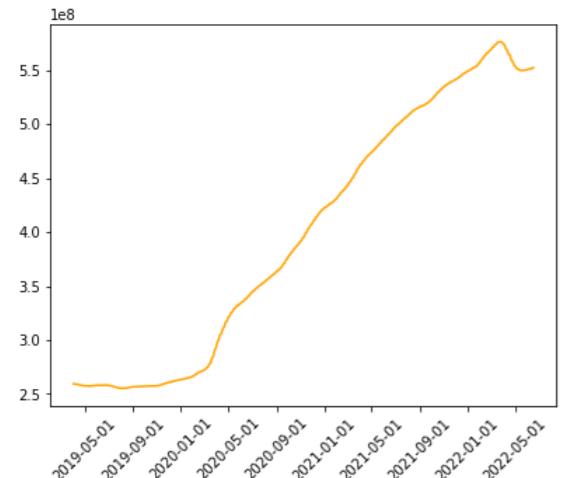
```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDDev	90d_lower	90d_upper
2022-06-17	86.120003	88.433461	96.553809	104.674158	89.425555	6.106626	77.212304	101.638806

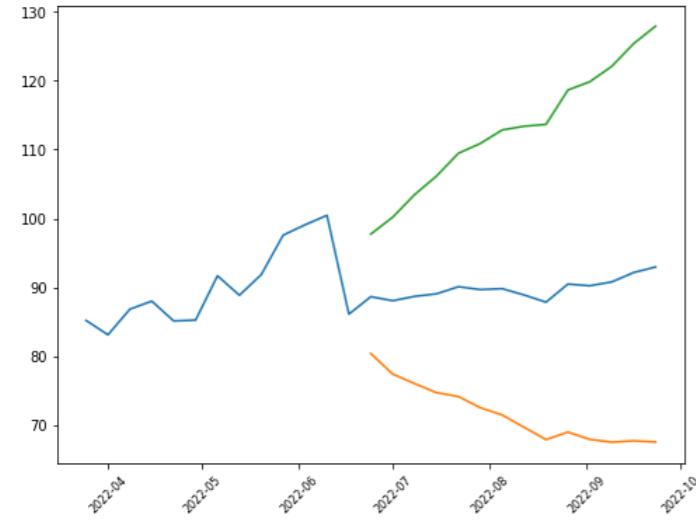
volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst	
XOM	1.153813	86.120003	552640281.25	0.738786	0.776498	0.53103

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -287.8400573730469
Index Volume Factor: 1.1835166983613057
Index Risk Trend Factor: -3.791860877423899



```
ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'add', False]
best inner cv score, sdev (11 folds): 136.76549887194895 167.42652080970876
test cv mean error, stdev (10 folds): 149.9049726689322 170.10508794627145
sell date: 2022-09-23
expected return: 0.07945807982303119
discounted return: 0.0008137259727394319
quarter return: 1.0777034556362188
```



```

['options', ('2022-07-15', '2023-01-20', '2024-01-19', '2026-02-21')]
['sustainability',                                     Value
2022-5
palmoil                         False
controversialWeapons            False
gambling                         False
socialScore                      9.82
nuclear                          False
furLeather                       False
alcoholic                        False
gmo                             False
catholic                         False
socialPercentile                None
peerCount                        66
governanceScore                 8.14
environmentPercentile           None
animalTesting                    True
tobacco                          False
totalEsg                          36.46
highestControversy               3
esgPerformance                  OUT_PERF
coal                            False
pesticides                       False
adult                           False
percentile                      81.8
peerGroup                        Oil & Gas Producers
smallArms                        False
environmentScore                 18.51
governancePercentile             None
militaryContract                False]
symbol: MANT
sector: Technology
Index: SP600
vol_30d_2yr: 4428022.265625
Sector 1YMF: 5.6399993896484375
1YMF: 5.6399993896484375
risk trend factor: 0.32063661839633545
    beta currentRatio debtToEquity dividendRate dividendYield \
MANT 0.737745      1.584     23.665      1.64      0.02

    earningsGrowth   ebitda ebitdaMargins forwardPE freeCashflow \
MANT -0.07 264191008 0.10344 27.143267 89507376

    grossMargins grossProfits heldPercentInstitutions      industry \
MANT 0.14856 379411000 0.71066 Software--Application

    marketCap operatingCashflow operatingMargins payoutRatio pegRatio \
MANT 3859215104 212171008 0.07374 0.4669 4.3

    priceToBook priceToSalesTrailing12Months profitMargins quickRatio \
MANT 2.329694 1.511073 0.05365 1.462

    returnOnAssets returnOnEquity revenueGrowth revenuePerShare      sector \
MANT 0.0485 0.08419 -0.007 62.85 Technology

    sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
MANT 27562400 2.93 53374000 1.308 396480000

    totalRevenue trailingPE
MANT 2553956096 27.853573

Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper
2022-06-17 94.790001 94.21236 94.956032 95.699705 88.233333 5.546632 77.140069 99.326598

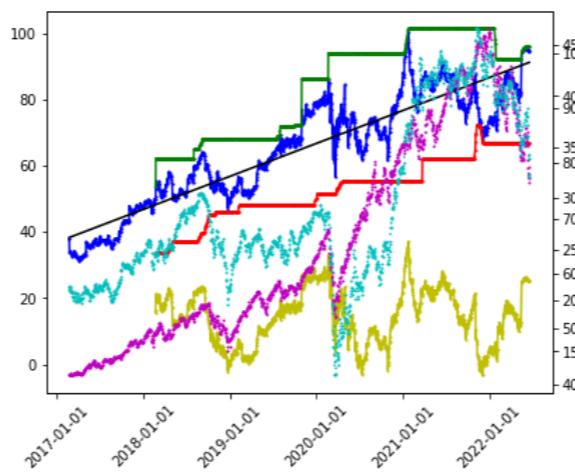
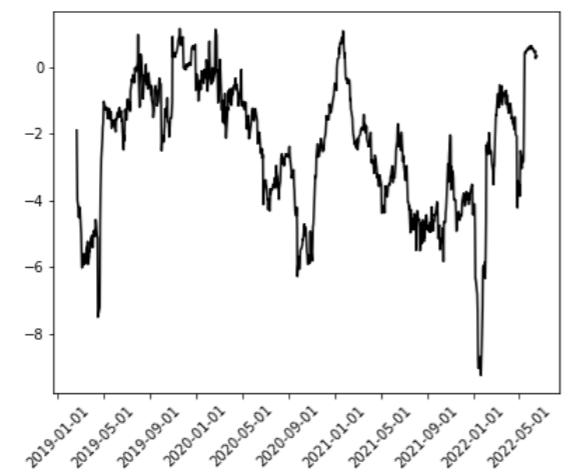
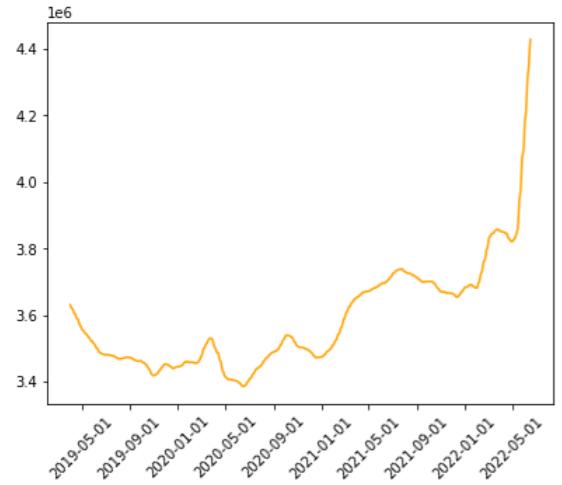
```

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst	
MANT	2.782348	94.790001	4428022.265625	0.833671	0.571232	0.363702

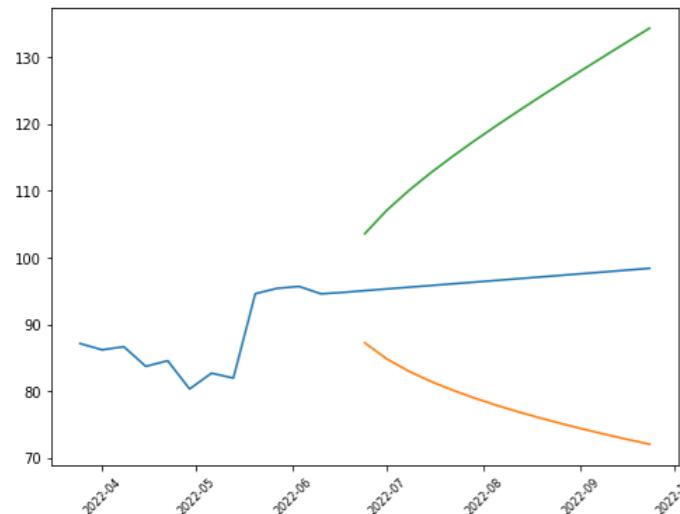
l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

6/22/22, 7:59 AM

Sector 1YMF: -363.4599914550781
Sector Volume Factor: 1.1528457613891094
Sector Risk Trend Factor: -4.954471974241429
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592



ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, 'add', False]
best inner cv score, sdev (11 folds): 79.08238855442798 56.433028025127456
test cv mean error, stdev (10 folds): 75.67082242780269 58.09585895529044
sell date: 2022-09-23
expected return: 0.03804220288704062
discounted return: 0.0003972750822611726
quarter return: 1.0372179175185376



AnalyzeSP1500-Backup

```
[ 'quarterly_balance_sheet', 2021-12-31 2021-09-30 2021-06-30 \
Intangible Assets 2.655550e+08 1.822340e+08 1.890820e+08
Capital Surplus 5.665730e+08 5.621590e+08 5.572110e+08
Total Liab 9.641450e+08 6.277590e+08 6.598970e+08
Total Stockholder Equity 1.675420e+09 1.656402e+09 1.628976e+09
Other Current Liab 3.619700e+07 3.444200e+07 3.061000e+07
Total Assets 2.639565e+09 2.284161e+09 2.288873e+09
Common Stock 4.110000e+05 4.100000e+05 4.100000e+05
Other Current Assets 1.337200e+07 8.339000e+06 7.756000e+06
Retained Earnings 1.117867e+09 1.103243e+09 1.080762e+09
Other Liab 2.231980e+08 1.996420e+08 1.913750e+08
Good Will 1.498988e+09 1.238090e+09 1.237734e+09
Treasury Stock -9.431000e+06 -9.410000e+06 -9.407000e+06
Other Assets 5.733000e+07 5.422800e+07 5.310300e+07
Cash 5.337400e+07 1.454140e+08 6.487400e+07
Total Current Liabilities 3.772280e+08 3.608110e+08 3.673090e+08
Other Stockholder Equity -2.730000e+05 -2.520000e+05 -2.490000e+05
Property Plant Equipment 2.086160e+08 2.063080e+08 2.137790e+08
Total Current Assets 5.975210e+08 5.917460e+08 5.836270e+08
Long Term Investments 1.155500e+07 1.155500e+07 1.154800e+07
Net Tangible Assets -8.912300e+07 2.360780e+08 2.021600e+08
Net Receivables 4.981750e+08 4.072410e+08 4.755650e+08
Long Term Debt 3.000000e+08 NaN 3.000000e+07
Accounts Payable 1.691400e+08 1.643870e+08 1.706120e+08
```

2021-03-31

```
Intangible Assets 1.953520e+08
Capital Surplus 5.498110e+08
Total Liab 5.999710e+08
Total Stockholder Equity 1.600428e+09
Other Current Liab 3.038300e+07
Total Assets 2.200399e+09
Common Stock 4.090000e+05
Other Current Assets 6.921000e+06
Retained Earnings 1.059608e+09
Other Liab 1.878370e+08
Good Will 1.237733e+09
Treasury Stock -9.400000e+06
Other Assets 5.127100e+07
Cash 6.924000e+06
Total Current Liabilities 3.141710e+08
Other Stockholder Equity -2.420000e+05
Property Plant Equipment 2.173500e+08
Total Current Assets 4.871450e+08
Long Term Investments 1.154800e+07
Net Tangible Assets 1.673430e+08
Net Receivables 4.430940e+08
Long Term Debt 2.150000e+07
Accounts Payable 1.225490e+08 ]
```

2021-12-31 2021-09-30 \

```
[ 'quarterly_cashflow', 2021-12-31 2021-09-30 \
Change To Liabilities -13433000.0 -1675000.0
Total Cashflows From Investing Activities -384184000.0 -10122000.0
Net Borrowings 299951000.0 -30047000.0
Total Cash From Financing Activities 285023000.0 -47840000.0
Change To Operating Activities -2485000.0 -8044000.0
Issuance Of Stock 1738000.0 1587000.0
Net Income 30124000.0 37956000.0
Change In Cash -92040000.0 80540000.0
Repurchase Of Stock -1175000.0 -599000.0
Total Cash From Operating Activities 7121000.0 138502000.0
Depreciation 19637000.0 18651000.0
Other Cashflows From Investing Activities 43000.0 43000.0
Dividends Paid -15491000.0 -15466000.0
Change To Account Receivables -18592000.0 71550000.0
Change To Netincome 16895000.0 21181000.0
Capital Expenditures -13709000.0 -10122000.0
Other Cashflows From Financing Activities NaN -3315000.0
```

2021-06-30 2021-03-31

```
Change To Liabilities 50481000.0 -26248000.0
Total Cashflows From Investing Activities -12996000.0 -17854000.0
Net Borrowings 8456000.0 6453000.0
Total Cash From Financing Activities -3735000.0 -8282000.0
Change To Operating Activities -12414000.0 -26116000.0
Issuance Of Stock 3291000.0 3142000.0
Net Income 36609000.0 32328000.0
Change In Cash 57950000.0 -34269000.0
Repurchase Of Stock -4000.0 -2489000.0
Total Cash From Operating Activities 74681000.0 -8133000.0
Depreciation 18435000.0 19152000.0
Other Cashflows From Investing Activities 227000.0 227000.0
Dividends Paid -15478000.0 -15388000.0
Change To Account Receivables -30089000.0 -26823000.0
Change To Netincome 14041000.0 11945000.0
Capital Expenditures -13223000.0 -17854000.0
Other Cashflows From Financing Activities -3315000.0 -3315000.0 ]
```

```
[{'quarterly_earnings': Revenue Earnings
Quarter
1Q2021 633224000 32328000
2Q2021 648578000 36609000
3Q2021 637821000 37956000
4Q2021 634333000 30124000]
[{'quarterly_financials': 2021-12-31 2021-09-30 2021-06-30 \
Research Development None None None
Effect Of Accounting Charges None None None
Income Before Tax 41639000.0 52611000.0 48323000.0
Minority Interest None None None
Net Income 30124000.0 37956000.0 36609000.0
Selling General Administrative 47618000.0 48343000.0 47048000.0
Gross Profit 91578000.0 101616000.0 95710000.0
Ebit 43960000.0 53273000.0 48662000.0
Operating Income 43960000.0 53273000.0 48662000.0
Other Operating Expenses None None None
Interest Expense -1063000.0 -606000.0 -366000.0
Extraordinary Items None None None
Non Recurring None None None
Other Items None None None
Income Tax Expense 11515000.0 14655000.0 11714000.0
Total Revenue 634333000.0 637821000.0 648578000.0
Total Operating Expenses 590373000.0 584548000.0 599916000.0
Cost Of Revenue 542755000.0 536205000.0 552868000.0
Total Other Income Expense Net -2321000.0 -662000.0 -339000.0
Discontinued Operations None None None
Net Income From Continuing Ops 30124000.0 37956000.0 36609000.0
Net Income Applicable To Common Shares 30124000.0 37956000.0 36609000.0}
```

```
2021-03-31
Research Development None
Effect Of Accounting Charges None
Income Before Tax 41985000.0
Minority Interest None
Net Income 32328000.0
Selling General Administrative 48086000.0
Gross Profit 90507000.0
Ebit 42421000.0
Operating Income 42421000.0
Other Operating Expenses None
Interest Expense -354000.0
Extraordinary Items None
Non Recurring None
Other Items None
Income Tax Expense 9657000.0
Total Revenue 633224000.0
Total Operating Expenses 590803000.0
Cost Of Revenue 542717000.0
Total Other Income Expense Net -436000.0
Discontinued Operations None
Net Income From Continuing Ops 32328000.0
Net Income Applicable To Common Shares 32328000.0 ]
```

```
[{'mutualfund_holders': Holder Shares Date Reported \
0 iShares Core S&P Smallcap ETF 1938605 2022-01-30
1 Vanguard Total Stock Market Index Fund 787243 2021-12-30
2 Victory Portfolios-Sycamore Small Company Oppo... 696400 2022-01-30
3 Vanguard Small-Cap Index Fund 690974 2021-12-30
4 First Trust NASDAQ Cybersecurity ETF 642526 2022-02-27
5 iShares Russell 2000 ETF 628355 2022-01-30
6 DFA U.S. Small Cap Value Series 544749 2022-01-30
7 Harbor Small Cap Value Fund 528590 2022-01-30
8 iShares S&P Smallcap 600 Value ETF 458357 2022-01-30
9 Janus Henderson Small Cap Value Fund 444296 2021-12-30}
```

```
% Out Value
0 0.0493 140044825
1 0.0200 57413631
2 0.0177 50307936
3 0.0176 50392733
4 0.0163 53567392
5 0.0160 45392365
6 0.0138 39352667
7 0.0134 38185341
8 0.0116 33111709
9 0.0113 32402507 }]
```

```
['options', ('2022-08-19',)]
```

```
symbol: SM
```

```
sector: Energy
```

```
Index: SP600
```

```
vol_30d_2yr: 85332599.609375
```

```
Sector 1YMF: 6.969999313354492
```

```
1YMF: 6.969999313354492
```

```
risk trend factor: 0.3050327621527311
```

```
beta currentRatio debtToEquity dividendRate dividendYield ebitda \
SM 5.179219 0.717 93.916 0.02 0.0005 1315937024
```

```

ebitdaMargins forwardPE freeCashflow grossMargins grossProfits \
SM      0.45427  4.047666  570353344     0.8671   2136878000

heldPercentInstitutions industry marketCap operatingCashflow \
SM        0.88372 Oil & Gas E&P 4967176192    1396240000

operatingMargins payoutRatio pegRatio priceToBook \
SM       0.18012      0.007     0.15   2.348467

priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
SM           1.714697     0.11608     0.7     0.06264

returnOnEquity revenueGrowth revenuePerShare sector sharesOutstanding \
SM       0.17312      0.931     23.974 Energy      121864000

shortRatio totalCash totalCashPerShare totalDebt totalRevenue trailingPE
SM      1.78  419887008      3.446  1986428032  2896824064  15.306045

Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper

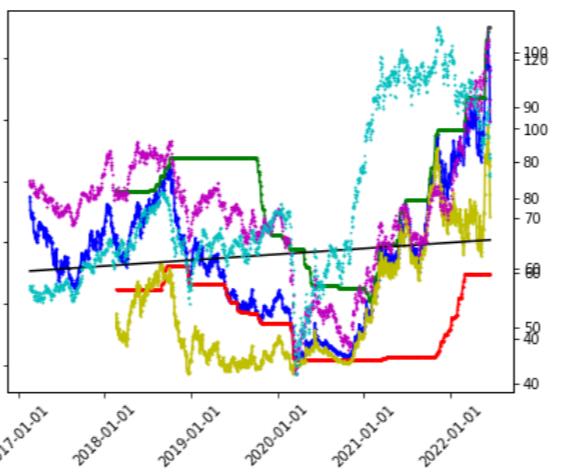
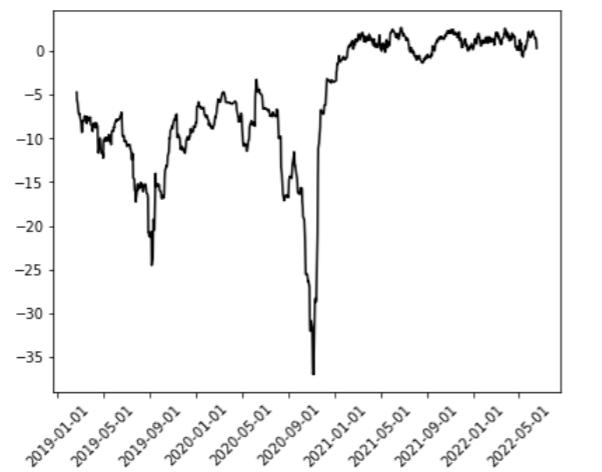
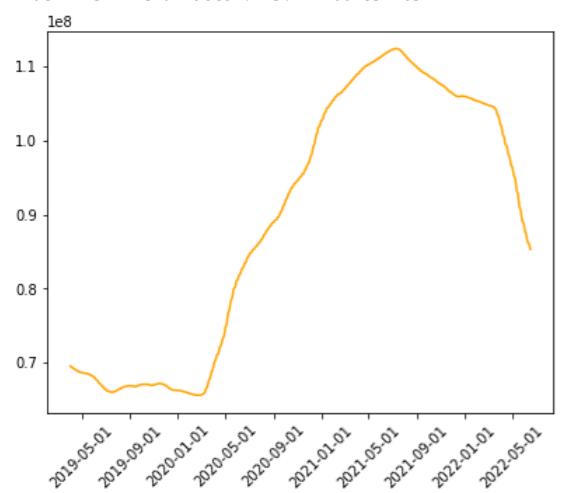
```

2022-06-17 39.709999 36.543497 46.618254 56.693011 41.080159 5.405133 30.269893 51.890424

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
SM	0.640686	39.709999	85332599.609375	0.715458	0.803847

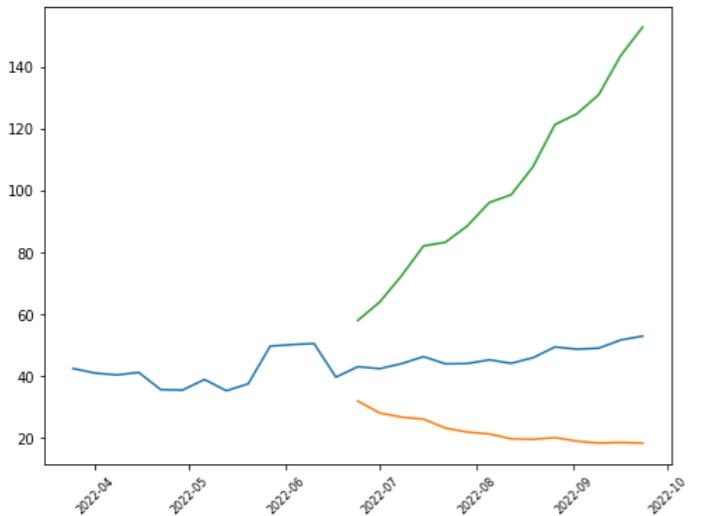
l axis		r axis	
legend	symbol	magenta	sector
blue		green	trailing_1yr_max
red	trailing_1yr_min	orange	30d_vol_2yr
black	risk_trend_factor/linear	yellow	supply_trend_1yr

Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592



lets next 13 weeks

2022-06-17
2022-06-28
inner cv scores:
best model: ['add', None]
best inner cv score, sdev (11 folds): 38.18857423099383 45.778047872192694
test cv mean error, stdev (10 folds): 41.84793522372869 46.45312695322053
sell date: 2022-09-23
expected return: 0.3335568166169001
discounted return: 0.0030669239586564867
quarter return: 1.3254144590195558



```
['options', ('2022-08-19', '2023-01-20', '2024-01-19')]
symbol: DINO
sector: Energy
Index: SP400
vol_30d_2yr: 51433534.1796875
Sector 1YMF: 6.369998931884766
1YMF: 6.369998931884766
risk trend factor: 0.2699152264297761
    beta currentRatio debtToEquity dividendRate dividendYield \
DINO 1.639705      1.822      57.138      1.6      0.0341

    ebitda ebitdaMargins freeCashflow grossMargins grossProfits \
DINO 1137624960      0.06186     -771616128      0.08786   1615735000

    heldPercentInstitutions           industry \
DINO          0.62529  Oil & Gas Refining & Marketing

    operatingCashflow operatingMargins payoutRatio pegRatio profitMargins \
DINO        406681984      0.04193      0.1032      0.35      0.03036

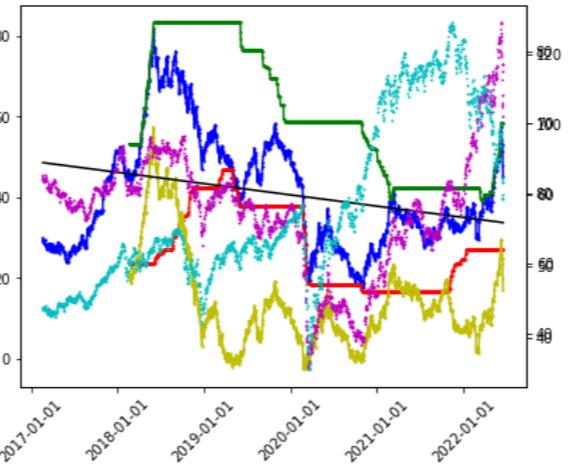
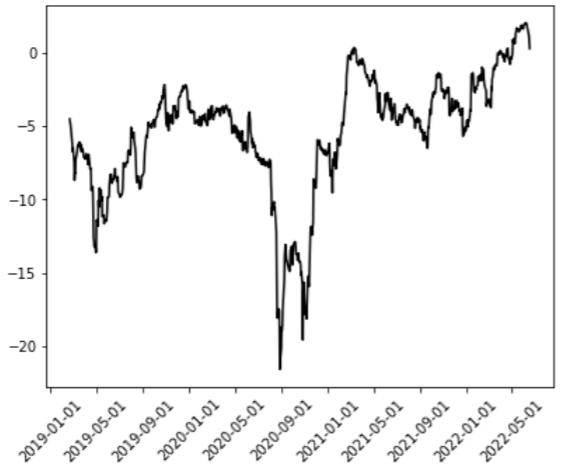
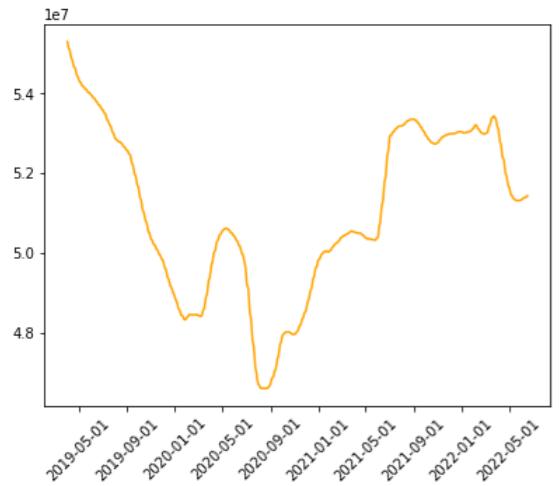
    quickRatio returnOnAssets returnOnEquity revenueGrowth revenuePerShare \
DINO      0.762      0.03946      0.11039      0.938      113.116

    sector shortRatio totalCash totalCashPerShare totalDebt totalRevenue
DINO  Energy       3.3  234444000      1.438  3596556032  18389141504
Adj Close  21dBOLD  21dMA-TP  21dBOLU  90dSMA  90dSDev  90d_lower  90d_upper
2022-06-17      45.0  43.432974  51.035714  58.638454  43.785397  6.19363  31.398138  56.172656
```

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
DINO	1.094012	45.0	51433534.179688	0.676181	0.488602	0.560442

	l axis	r axis
legend		
blue	symbol	magenta
green	trailing_1yr_max	cyan
red	trailing_1yr_min	index
orange	30d_vol_2yr	
black	risk_trend_factor/linear	
yellow	supply_trend_1yr	

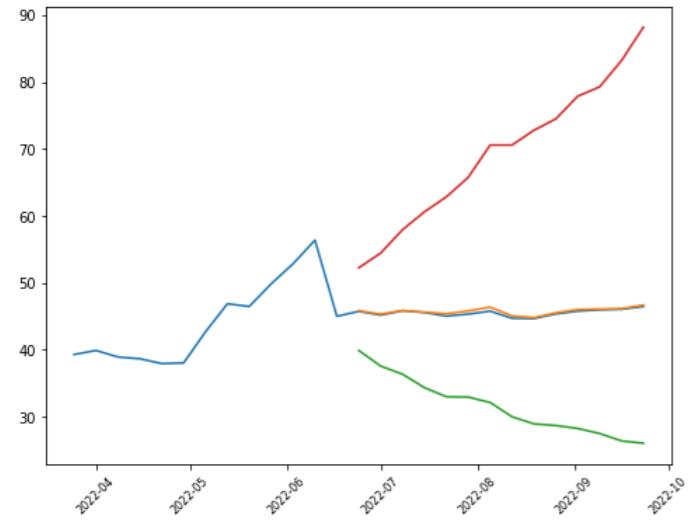
Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -69.05999755859375
Index Volume Factor: 0.5765983741853883
Index Risk Trend Factor: -5.134573474205833



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'mul', True]
best inner cv score, sdev (11 folds): 70.25982692072806 77.80841864848905
test cv mean error, stdev (10 folds): 75.88547288187537 79.44466432212066
sell date: 2022-09-23
expected return: 0.03251179010994842
discounted return: 0.00034042457790106617
quarter return: 1.0318091641363818

```



```
[ 'quarterly_balance_sheet', 2021-12-31 2021-09-30 2021-06-30 \
Intangible Assets 2.990580e+08 6.410410e+08 6.546840e+08
Capital Surplus 4.220075e+09 4.232504e+09 4.225032e+09
Total Liab 6.622148e+09 6.567642e+09 6.519789e+09
Total Stockholder Equity 5.687885e+09 5.726740e+09 5.443375e+09
Minority Interest 6.065800e+08 6.027990e+08 5.968690e+08
Deferred Long Term Liab 3.973850e+08 3.453140e+08 3.037070e+08
Other Current Liab 2.699100e+07 1.499010e+08 2.866900e+07
Total Assets 1.291661e+10 1.289718e+10 1.256003e+10
Common Stock 2.560000e+06 2.560000e+06 2.560000e+06
Other Current Assets 6.463000e+06 1.967000e+06 1.563000e+06
Retained Earnings 4.413836e+09 4.453366e+09 4.172560e+09
Other Liab 1.118644e+09 1.136432e+09 1.078211e+09
Good Will 2.293044e+09 2.293305e+09 2.293544e+09
Treasury Stock -2.948586e+09 -2.961690e+09 -2.956777e+09
Other Assets 7.510120e+08 3.453140e+08 3.037070e+08
Cash 2.344440e+08 1.481562e+09 1.398280e+09
Total Current Liabilities 2.065464e+09 2.044208e+09 2.012771e+09
Other Stockholder Equity 2.671000e+06 4.460000e+06 9.653000e+06
Property Plant Equipment 5.811045e+09 5.262498e+09 5.163648e+09
Total Current Assets 3.762454e+09 4.355023e+09 4.144450e+09
Net Tangible Assets 3.095783e+09 2.792394e+09 2.495147e+09
Net Receivables 1.339270e+09 9.475650e+08 9.962990e+08
Long Term Debt 3.072737e+09 3.072352e+09 3.100969e+09
Inventory 2.122128e+09 1.887080e+09 1.700605e+09
Accounts Payable 1.613484e+09 1.460769e+09 1.480820e+09
```

2021-03-31

```
Intangible Assets 6.498000e+08
Capital Surplus 4.216816e+09
Total Liab 6.096771e+09
Total Stockholder Equity 5.259187e+09
Minority Interest 5.788590e+08
Deferred Long Term Liab 3.087260e+08
Other Current Liab 4.575800e+07
Total Assets 1.193482e+10
Common Stock 2.560000e+06
Other Current Assets 2.445000e+06
Retained Earnings 4.003733e+09
Other Liab 9.379000e+08
Good Will 2.293422e+09
Treasury Stock -2.963922e+09
Other Assets 3.087260e+08
Cash 1.193428e+09
Total Current Liabilities 1.757308e+09
Other Stockholder Equity 4.658000e+06
Property Plant Equipment 4.982533e+09
Total Current Assets 3.700276e+09
Net Tangible Assets 2.315905e+09
Net Receivables 8.440410e+08
Long Term Debt 3.126091e+09
Inventory 1.616848e+09
Accounts Payable 1.266690e+09 ]
```

2021-12-31 2021-09-30 \

```
[ 'quarterly_cashflow', 2021-12-31 2021-09-30 \
Investments 6.480000e+05 410000.0
Change To Liabilities 1.738690e+08 -28662000.0
Total Cashflows From Investing Activities -8.887430e+08 -116164000.0
Net Borrowings -2.443000e+06 -30251000.0
Total Cash From Financing Activities -2.763400e+07 -45691000.0
Change To Operating Activities -1.612560e+08 72162000.0
Net Income -3.953000e+07 280787000.0
Change In Cash -1.247118e+09 83282000.0
Repurchase Of Stock -6.445000e+06 -122000.0
Effect Of Exchange Rate 2.071000e+06 -4276000.0
Total Cash From Operating Activities -3.328120e+08 249413000.0
Depreciation -2.702000e+06 121220000.0
Change To Inventory 5.507100e+07 -194922000.0
Change To Account Receivables -3.937620e+08 72256000.0
Other Cashflows From Financing Activities -1.874600e+07 -15318000.0
Change To Netincome -1.073170e+08 -58845000.0
Capital Expenditures -2.650640e+08 -215504000.0
Other Cashflows From Investing Activities NaN NaN
Dividends Paid NaN NaN
```

2021-06-30 2021-03-31

```
Investments 3107000.0 3107000.0
Change To Liabilities 201040000.0 266163000.0
Total Cashflows From Investing Activities -175248000.0 -147064000.0
Net Borrowings -26623000.0 -18173000.0
Total Cash From Financing Activities -48917000.0 -89561000.0
Change To Operating Activities 55153000.0 98871000.0
Net Income 168850000.0 148217000.0
Change In Cash 204852000.0 -174890000.0
Repurchase Of Stock -479000.0 -12000.0
Effect Of Exchange Rate 1262000.0 -591000.0
Total Cash From Operating Activities 427755000.0 62326000.0
```

```

Depreciation          124042000.0 124079000.0
Change To Inventory   36530000.0 -241238000.0
Change To Account Receivables -147010000.0 -145891000.0
Other Cashflows From Financing Activities -21815000.0 -13713000.0
Change To Netincome    -82000.0 -224054000.0
Capital Expenditures -182880000.0 -149961000.0
Other Cashflows From Investing Activities -2897000.0 2897000.0
Dividends Paid          NaN -57663000.0 ]
['quarterly_earnings',      Revenue   Earnings
Quarter

```

```

1Q2021 3504293000 148217000
2Q2021 4577123000 168850000
3Q2021 4685059000 280787000
4Q2021 5622667000 -39530000]

```

```
['quarterly_financials',      2021-12-31  2021-09-30 \

```

```

Research Development        None     None
Effect Of Accounting Charges None     None
Income Before Tax          -43150000.0 357507000.0
Minority Interest           606580000.0 602799000.0
Net Income                  -39530000.0 280787000.0
Selling General Administrative 92633000.0 87686000.0
Gross Profit                225010000.0 509881000.0
Ebit                         -1821000.0 300975000.0
Operating Income             -1821000.0 300975000.0
Other Operating Expenses    None     None
Interest Expense            -30955000.0 -26892000.0
Extraordinary Items          None     None
Non Recurring               None     None
Other Items                 None     None
Income Tax Expense          -26046000.0 54766000.0
Total Revenue                5622667000.0 4685059000.0
Total Operating Expenses    562448000.0 4384084000.0
Cost Of Revenue              5397657000.0 4175178000.0
Total Other Income Expense Net -41329000.0 56532000.0
Discontinued Operations     None     None
Net Income From Continuing Ops -17104000.0 302741000.0
Net Income Applicable To Common Shares -39107000.0 277234000.0

```

```
2021-06-30 2021-03-31

```

```

Research Development        None     None
Effect Of Accounting Charges None     None
Income Before Tax          318252000.0 154543000.0
Minority Interest           596869000.0 578859000.0
Net Income                  168850000.0 148217000.0
Selling General Administrative 78686000.0 73245000.0
Gross Profit                536228000.0 344616000.0
Ebit                         333500000.0 147292000.0
Operating Income             333500000.0 147292000.0
Other Operating Expenses    None     None
Interest Expense            -28942000.0 -38386000.0
Extraordinary Items          None     None
Non Recurring               None     None
Other Items                 None     None
Income Tax Expense          123485000.0 -28307000.0
Total Revenue                4577123000.0 3504293000.0
Total Operating Expenses    4243623000.0 3357001000.0
Cost Of Revenue              4040895000.0 3159677000.0
Total Other Income Expense Net -15248000.0 7251000.0
Discontinued Operations     None     None
Net Income From Continuing Ops 194767000.0 182850000.0
Net Income Applicable To Common Shares 166627000.0 146175000.0 ]

```

```
['mutualfund_holders',      Holder   Shares Date Reported \

```

```

0      iShares Core S&P Midcap ETF 4158265 2022-01-30
1      Vanguard Total Stock Market Index Fund 4157166 2021-12-30
2      Fidelity Low-Priced Stock Fund 3753790 2022-02-27
3      Vanguard Small-Cap Index Fund 3681912 2021-12-30
4  John Hancock Fds III-Disciplined Value Mid Cap Fd 2884974 2021-12-30
5  SPDR (R) Ser Tr-SPDR (R) S&P (R) Oil & Gas Exp... 2700673 2022-01-30
6      Vanguard Small Cap Value Index Fund 2335086 2021-12-30
7      DFA U.S. Small Cap Value Series 1999592 2022-01-30
8      Vanguard Extended Market Index Fund 1980785 2021-12-30
9  John Hancock Mutual Fds III-Disciplined Value Fd 1734416 2021-12-30

```

```
% Out      Value

```

```

0 0.0186 146204597
1 0.0186 136271901
2 0.0168 114302905
3 0.0165 120693075
4 0.0129 94569447
5 0.0121 94955662
6 0.0105 76544119
7 0.0090 70305654
8 0.0089 64930132
9 0.0078 56854156 ]

```

```
symbol: PLAB
sector: Technology
```

Index: SP600
vol_30d_2yr: 10786618.9453125
Sector 1YMF: 2.289999618530273
1YMF: 2.289999618530273
risk trend factor: 0.26412914530661946

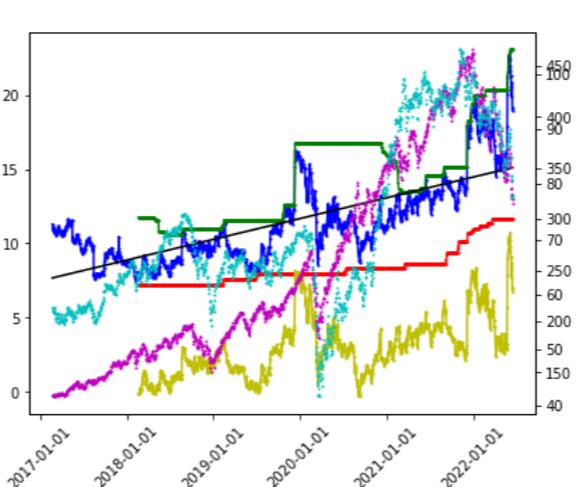
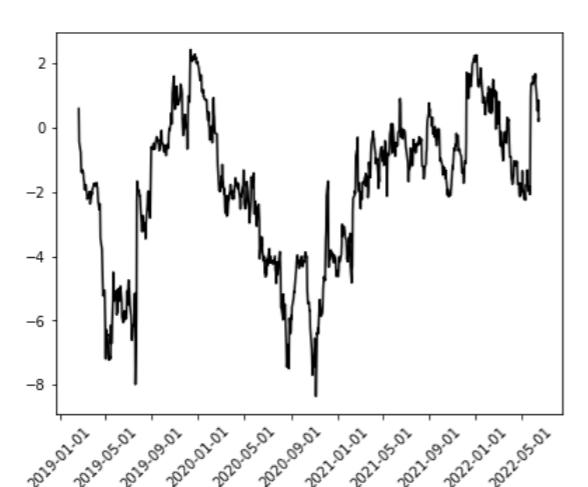
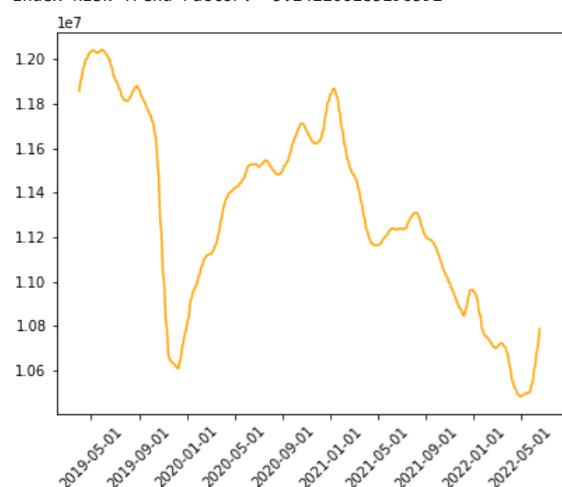
	beta	currentRatio	debtToEquity	earningsGrowth	ebitda	\
PLAB	0.946914	3.38	8.253	1.653	230734000	
	ebitdaMargins	forwardPE	freeCashflow	grossMargins	grossProfits	\
PLAB	0.30918	8.626126	88907624	0.30465	167044000	
	heldPercentInstitutions			industry	marketCap	\
PLAB	0.90545	Semiconductor Equipment & Materials		1179664896		
	operatingCashflow	operatingMargins	payoutRatio	pegRatio	priceToBook	\
PLAB	195842000	0.19571	0	1.14	1.391614	
	priceToSalesTrailing12Months	profitMargins	quickRatio	returnOnAssets		\
PLAB	1.580754	0.11709	2.86	0.07027		
	returnOnEquity	revenueGrowth	revenuePerShare	sector	\	
PLAB	0.12517	0.28	12.342	Technology		
	sharesOutstanding	shortRatio	totalCash	totalCashPerShare	totalDebt	\
PLAB	61601300	1.44	329281984	5.345	86678000	
	totalRevenue	trailingPE				
PLAB	746267008	13.457484				

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	19.15	14.678059	19.802381	24.926703	17.249841	2.549321	12.151199	22.348481

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
PLAB	2.163783	19.15	10786618.945312	0.729861	0.736899	0.332818

	I axis		r axis
	legend		legend
blue	symbol		magenta
green	trailing_1yr_max		cyan
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		

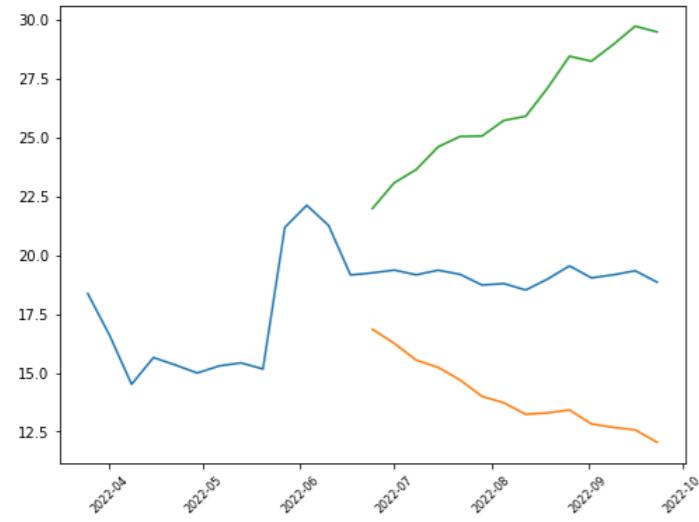
```
yellow      supply_trend_1yr
Sector 1YMF: -363.4599914550781
Sector Volume Factor: 1.1528457613891094
Sector Risk Trend Factor: -4.954471974241429
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592
```



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'add', False]
best inner cv score, sdev (11 folds): 4.567473504594047 5.146782222487015
test cv mean error, stdev (10 folds): 4.293159696638102 5.320767769860798
sell date: 2022-08-26
expected return: 0.020160538588419565
discounted return: 0.0003024700634008948
quarter return: 1.0282137137990637

```



```

['options', ('2022-12-16',)]
symbol: MPC
sector: Energy
Index: SP500
vol_30d_2yr: 141817662.109375
Sector 1YMF: 6.860008239746094
1YMF: 6.860008239746094
risk trend factor: 0.20927420668724137
    beta currentRatio debtToEquity dividendRate dividendYield \
MPC 1.910294      1.704      80.117      2.32      0.0242

```

```

earningsGrowth      ebitda ebitdaMargins forwardPE freeCashflow \
MPC      1.917 7120999936      0.05912 21.64929 16415250432

```

```

grossMargins grossProfits heldPercentInstitutions \
MPC      0.0867 10443000000      0.82037

```

```

industry      marketCap operatingCashflow \
MPC  Oil & Gas Refining & Marketing 56240115712      4360000000

```

```

operatingMargins payoutRatio pegRatio priceToBook \
MPC      0.03119      0.5472      0.55      2.009414

```

```

priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
MPC      0.466913      0.08085      1.222      0.02754

```

```

returnOnEquity revenueGrowth revenuePerShare sector sharesOutstanding \
MPC      0.08003      0.967      189.986 Energy      615587968

```

```

shortRatio      totalCash totalCashPerShare      totalDebt totalRevenue \
MPC      2.92 10839000064      19.177 26904000512 120450998272

```

```

trailingPE
MPC 6.413028

```

Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
-----------	---------	----------	---------	--------	---------	-----------	-----------

```

2022-06-17 87.290001 89.493723 102.090159 114.686595 92.726984 8.615037 75.49691 109.957059

```

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
---------------	----------	-------------	---------	-----	-------

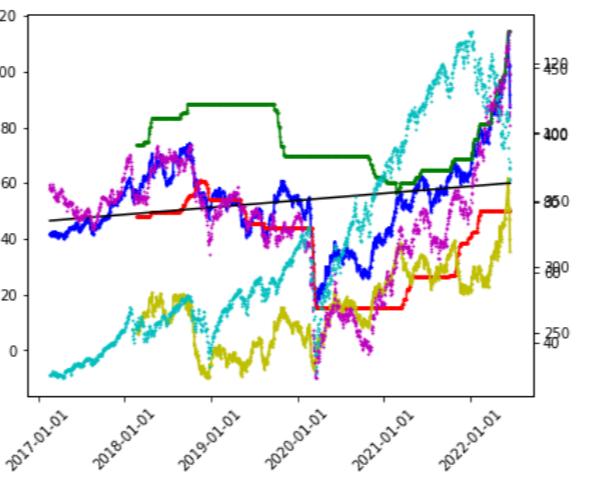
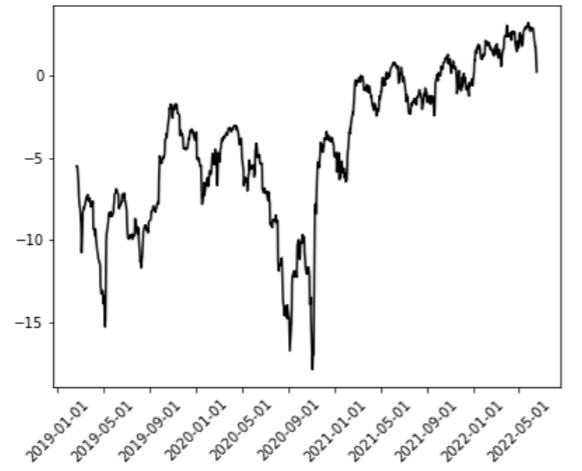
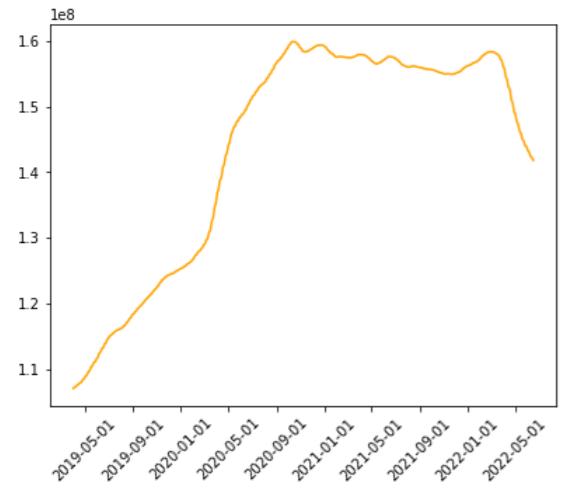
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MPC 1.221452 87.290001 141817662.109375 0.691764 0.544636 0.514361

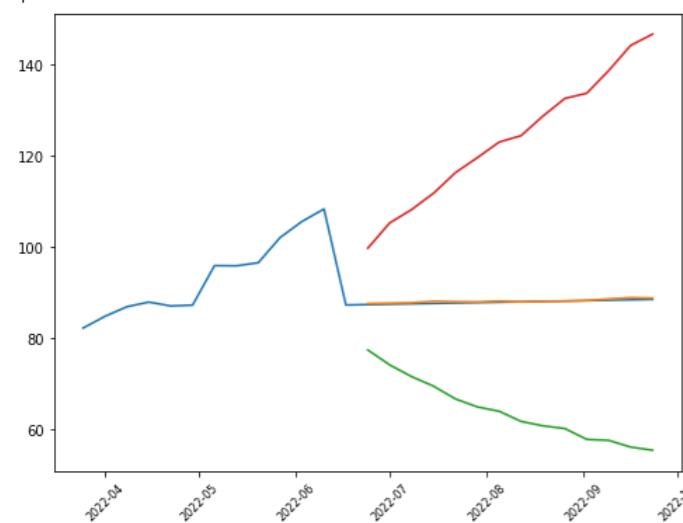
```

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -287.8400573730469
Index Volume Factor: 1.1835166983613057
Index Risk Trend Factor: -3.791860877423899



ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, 'mul', False]
best inner cv score, sdev (11 folds): 143.94496742317762 157.58998735053586
test cv mean error, stdev (10 folds): 151.18349763673814 163.530290807923
sell date: 2022-09-23
expected return: 0.01413756989027312
discounted return: 0.00014935760454304337
quarter return: 1.013834699429743



```
[ 'quarterly_balance_sheet', 2021-12-31 2021-09-30 2021-06-30 \
Capital Surplus 3.326200e+10 3.325600e+10 3.323800e+10
Total Liab 5.179200e+10 5.333600e+10 5.760700e+10
Total Stockholder Equity 2.620600e+10 2.828000e+10 2.892100e+10
Minority Interest 7.375000e+09 7.684000e+09 7.772000e+09
Other Current Liab 2.278000e+09 3.377000e+09 6.148000e+09
Total Assets 8.537300e+10 8.930000e+10 9.430000e+10
Common Stock 1.000000e+07 1.000000e+07 1.000000e+07
Other Current Assets 5.680000e+08 5.850000e+08 5.850000e+08
Retained Earnings 1.290500e+10 1.248400e+10 1.216000e+10
Other Liab 7.999000e+09 8.193000e+09 8.825000e+09
Good Will 8.256000e+09 8.256000e+09 8.256000e+09
Treasury Stock -1.997100e+10 -1.747000e+10 -1.648700e+10
Other Assets 2.400000e+09 2.463000e+09 2.532000e+09
Cash 5.291000e+09 5.874000e+09 1.183900e+10
Total Current Liabilities 1.789800e+10 1.689800e+10 1.951200e+10
Deferred Long Term Asset Charges 2.000000e+06 NaN NaN
Short Long Term Debt 4.980000e+08 7.300000e+07 7.000000e+07
Other Stockholder Equity -6.700000e+07 -3.440000e+08 -3.400000e+08
Property Plant Equipment 3.881200e+10 3.905400e+10 3.949600e+10
Total Current Assets 3.049600e+10 3.414300e+10 3.859200e+10
Long Term Investments 5.409000e+09 5.384000e+09 5.424000e+09
Net Tangible Assets 1.795000e+10 2.002400e+10 2.066500e+10
Short Term Investments 5.548000e+09 7.352000e+09 5.418000e+09
Net Receivables 1.103400e+10 1.112100e+10 1.187100e+10
Long Term Debt 2.444300e+10 2.665500e+10 2.763900e+10
Inventory 8.055000e+09 9.211000e+09 8.879000e+09
Accounts Payable 1.370000e+10 1.219600e+10 1.217000e+10
```

2021-03-31

```
Capital Surplus 3.322200e+10
Total Liab 5.717200e+10
Total Stockholder Equity 2.159200e+10
Minority Interest 7.887000e+09
Other Current Liab 3.370000e+09
Total Assets 8.665100e+10
Common Stock 1.000000e+07
Other Current Assets 1.176200e+10
Retained Earnings 4.029000e+09
Other Liab 9.386000e+09
Good Will 8.256000e+09
Treasury Stock -1.566900e+10
Other Assets 2.594000e+09
Cash 6.240000e+08
Total Current Liabilities 1.608500e+10
Deferred Long Term Asset Charges NaN
Short Long Term Debt 6.900000e+07
Other Stockholder Equity -5.110000e+08
Property Plant Equipment 4.000500e+10
Total Current Assets 3.036100e+10
Long Term Investments 5.435000e+09
Net Tangible Assets 1.333600e+10
Short Term Investments NaN
Net Receivables 9.568000e+09
Long Term Debt 3.006100e+10
Inventory 8.407000e+09
Accounts Payable 9.953000e+09 ]
```

2021-12-31 2021-09-30 \

```
[ 'quarterly_cashflow', 2021-12-31 2021-09-30 \
Investments 1.742000e+09 -1.934000e+09
Change To Liabilities 1.590000e+09 1.930000e+08
Total Cashflows From Investing Activities 1.448000e+09 -2.054000e+09
Net Borrowings -1.951000e+09 -1.018000e+09
Total Cash From Financing Activities -5.703000e+09 -2.762000e+09
Change To Operating Activities -2.000000e+06 1.000000e+06
Issuance Of Stock 3.500000e+07 1.800000e+07
Net Income 7.740000e+08 6.940000e+08
Change In Cash -5.810000e+08 -5.964000e+09
Repurchase Of Stock -2.742000e+09 -9.280000e+08
Total Cash From Operating Activities 3.674000e+09 -1.148000e+09
Depreciation 8.130000e+08 8.360000e+08
Other Cashflows From Investing Activities 1.320000e+08 2.400000e+08
Dividends Paid -3.540000e+08 -3.700000e+08
Change To Inventory 1.173000e+09 -3.260000e+08
Change To Account Receivables -1.534000e+09 1.820000e+08
Other Cashflows From Financing Activities -6.910000e+08 -4.640000e+08
Change To Netincome 8.400000e+08 -2.746000e+09
Capital Expenditures -4.810000e+08 -3.770000e+08
```

2021-06-30 2021-03-31

```
Investments -5.477000e+09 -5.000000e+07
Change To Liabilities 2.656000e+09 1.821000e+09
Total Cashflows From Investing Activities 1.567000e+10 -2.670000e+08
Net Borrowings -4.169000e+09 8.650000e+08
Total Cash From Financing Activities -5.970000e+09 1.600000e+07
Change To Operating Activities -1.000000e+06 5.000000e+06
Issuance Of Stock 3.000000e+07 2.300000e+07
```

```

Net Income          8.512000e+09 -2.420000e+08
Change In Cash      1.108000e+10  2.030000e+08
Repurchase Of Stock -9.840000e+08 -9.840000e+08
Total Cash From Operating Activities 1.380000e+09  4.540000e+08
Depreciation        8.710000e+08  8.440000e+08
Other Cashflows From Investing Activities 2.144000e+10  1.100000e+07
Dividends Paid       -3.810000e+08 -3.790000e+08
Change To Inventory -4.720000e+08 -4.080000e+08
Change To Account Receivables -2.224000e+08 -1.723000e+09
Other Cashflows From Financing Activities -4.660000e+08 -4.930000e+08
Change To Netincome -7.981000e+08  1.350000e+08
Capital Expenditures -3.020000e+08 -3.040000e+08 ]
['quarterly_earnings', Revenue    Earnings
Quarter
1Q2021 22788000000 -242000000
2Q2021 29734000000 8512000000
3Q2021 32491000000 694000000
4Q2021 35438000000 774000000]

```

```
['quarterly_financials', 2021-12-31 2021-09-30 \

```

	2021-12-31	2021-09-30
Research Development	None	None
Effect Of Accounting Charges	None	None
Income Before Tax	1348000000.0	1012000000.0
Minority Interest	7375000000.0	7684000000.0
Net Income	774000000.0	694000000.0
Selling General Administrative	654000000.0	691000000.0
Gross Profit	3254000000.0	2928000000.0
Ebit	1610000000.0	1208000000.0
Operating Income	1610000000.0	1208000000.0
Other Operating Expenses	177000000.0	193000000.0
Interest Expense	-302000000.0	-313000000.0
Extraordinary Items	None	None
Non Recurring	None	None
Other Items	None	None
Income Tax Expense	243000000.0	-18000000.0
Total Revenue	35438000000.0	32491000000.0
Total Operating Expenses	33828000000.0	31283000000.0
Cost Of Revenue	32184000000.0	29563000000.0
Total Other Income Expense Net	-262000000.0	-196000000.0
Discontinued Operations	Nan	Nan
Net Income From Continuing Ops	1105000000.0	1030000000.0
Net Income Applicable To Common Shares	772000000.0	694000000.0

```
2021-06-30 2021-03-31

```

	2021-06-30	2021-03-31
Research Development	None	None
Effect Of Accounting Charges	None	None
Income Before Tax	593000000.0	-136000000.0
Minority Interest	7772000000.0	7887000000.0
Net Income	8512000000.0	-242000000.0
Selling General Administrative	681000000.0	575000000.0
Gross Profit	2557000000.0	1704000000.0
Ebit	816000000.0	123000000.0
Operating Income	816000000.0	123000000.0
Other Operating Expenses	189000000.0	162000000.0
Interest Expense	-318000000.0	-334000000.0
Extraordinary Items	None	None
Non Recurring	None	None
Other Items	None	None
Income Tax Expense	500000.0	3400000.0
Total Revenue	29734000000.0	22788000000.0
Total Operating Expenses	28918000000.0	22665000000.0
Cost Of Revenue	27177000000.0	21084000000.0
Total Other Income Expense Net	-223000000.0	-259000000.0
Discontinued Operations	8214000000.0	234000000.0
Net Income From Continuing Ops	588000000.0	-170000000.0
Net Income Applicable To Common Shares	8512000000.0	-242000000.0]

```
['mutualfund_holders', Holder Shares Date Reported \

```

	Holder	Shares	Date Reported
0	Select Sector SPDR Fund-Energy Select	18103056	2022-01-30
1	Vanguard Total Stock Market Index Fund	17494854	2021-12-30
2	Vanguard 500 Index Fund	13037019	2021-12-30
3	Vanguard Mid-Cap Index Fund	6960433	2021-12-30
4	SPDR S&P 500 ETF Trust	6540311	2022-01-30
5	Fidelity 500 Index Fund	6304109	2022-02-27
6	iShares Core S&P 500 ETF	5120813	2022-01-30
7	Vanguard Index-Value Index Fund	4704115	2021-12-30
8	Vanguard Institutional Index Fund-Institutional...	4638261	2021-12-30
9	iShares Select Dividend ETF	4127022	2022-01-30

% Out	Value
0.0335	1298894268
0.0323	1119495707
0.0241	834238845
0.0129	445398107
0.0121	469267314
0.0117	490900967
0.0095	367418332
0.0087	301016318

```

8 0.0086 296802321
9 0.0076 296113828 ]
['options', ('2022-07-15', '2022-09-16', '2023-01-20', '2024-01-19')]
['sustainability',
2022-5
palmOil False
controversialWeapons False
gambling False
socialScore 7.01
nuclear False
furLeather False
alcoholic False
gmo False
catholic False
socialPercentile 0
peerCount 39
governanceScore 5.87
environmentPercentile 0
animalTesting
tobacco False
totalEsg 28.78
highestControversy 3
esgPerformance None
coal False
pesticides False
adult False
percentile 57.14
peerGroup Refiners & Pipelines
smallArms False
environmentScore 15.91
governancePercentile 0
militaryContract False]
symbol: LLY
sector: Healthcare
Index: SP500
vol_30d_2yr: 70977344.3359375
Sector 1YMF: 8.8499755859375
1YMF: 8.8499755859375
risk trend factor: 0.18730107060185186
    beta currentRatio debtToEquity dividendRate dividendYield \
LLY 0.397459 1.267 174.931 3.92 0.0135

earningsGrowth ebitda ebitdaMargins forwardPE freeCashflow \
LLY 0.409 10721399808 0.36563 32.746696 4736287744

grossMargins grossProfits heldPercentInstitutions \
LLY 0.7556 21345300000 0.84117

industry marketCap operatingCashflow \
LLY Drug Manufacturers-General 282520584192 8062499840

operatingMargins payoutRatio pegRatio priceToBook \
LLY 0.30994 0.5245 3.51 28.684158

priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
LLY 9.634844 0.20903 0.772 0.12117

returnOnEquity revenueGrowth revenuePerShare sector \
LLY 0.74019 0.148 32.376 Healthcare

sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
LLY 950160000 1.63 2571599872 2.857 16551999488

totalRevenue trailingPE
LLY 29322799104 44.19441

Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper


---


2022-06-17 290.899994 284.096885 302.232381 320.367877 296.315556 9.524706 277.266144 315.364968

volume_factor latest_p vol_30d_2yr pct_2yr adf hurst

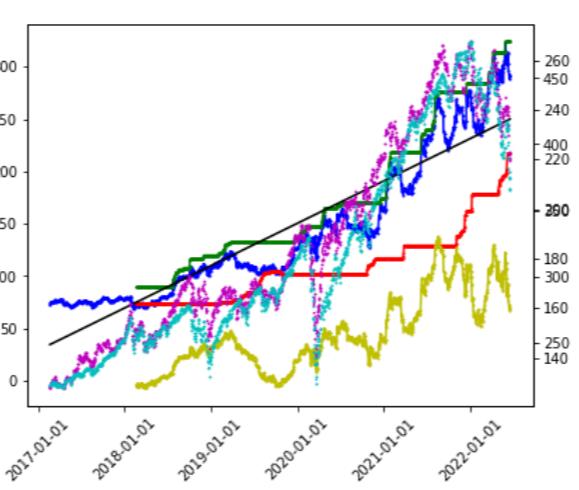
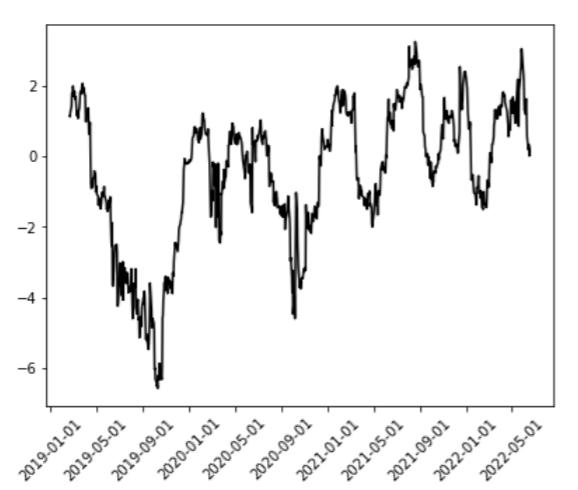
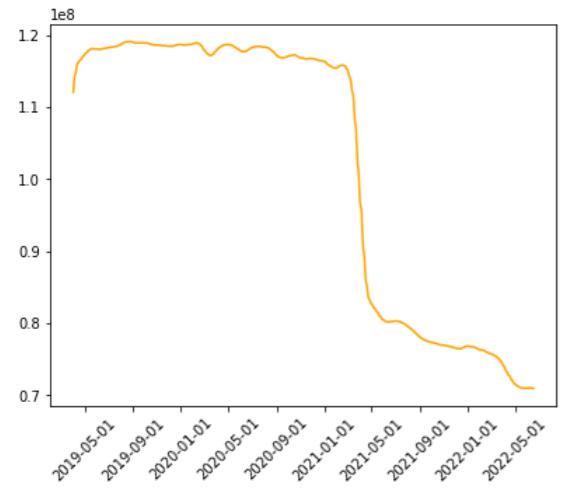

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LLY 0.967658 290.899994 70977344.335938 0.829733 0.979741 0.407173

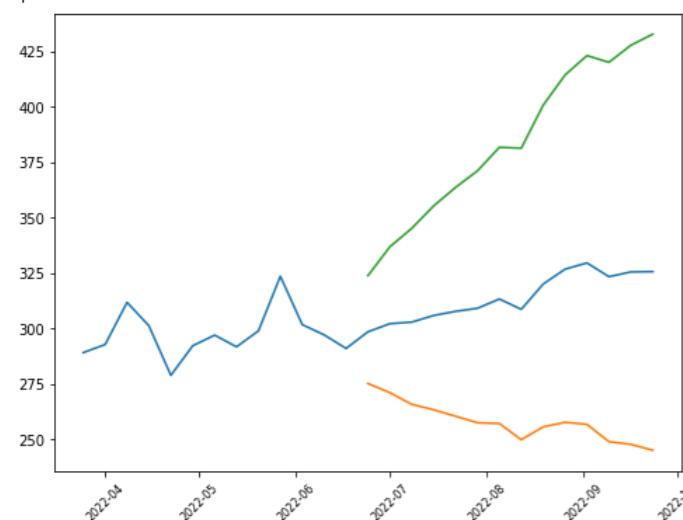
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l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Sector 1YMF: -122.20997619628906
Sector Volume Factor: 1.2238851152317325
Sector Risk Trend Factor: -3.3236323632363236
Index 1YMF: -287.8400573730469
Index Volume Factor: 1.1835166983613057
Index Risk Trend Factor: -3.791860877423899



ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'add', False]
best inner cv score, sdev (11 folds): 404.3004619386717 288.1892693369166
test cv mean error, stdev (10 folds): 433.7032966822759 286.0945278924163
sell date: 2022-09-02
expected return: 0.13279535875519005
discounted return: 0.0017095191098663864
quarter return: 1.1701611544433472



```

['options', ('2022-07-15', '2023-01-20', '2024-01-19')]
['sustainability',                                     Value
2022-5
palmoil          False
controversialWeapons  False
gambling          False
socialScore        17.4
nuclear            False
furLeather         False
alcoholic          False
gmo                False
catholic           True
socialPercentile   None
peerCount          83
governanceScore    11.56
environmentPercentile  None
animalTesting      True
tobacco             False
totalEsg            32.4
highestControversy 2
esgPerformance     OUT_PERF
coal               False
pesticides          False
adult               False
percentile          70.21
peerGroup           Pharmaceuticals
smallArms           False
environmentScore    3.43
governancePercentile  None
militaryContract   False]
symbol: VLO
sector: Energy
Index: SP500
vol_30d_2yr: 90552079.1015625
Sector 1YMF: 9.160011291503906
1YMF: 9.160011291503906
risk trend factor: 0.1828345622851758
  beta currentRatio debtToEquity dividendRate dividendYield \
VLO  1.762704      1.178      64.483      3.92      0.0349

  ebitda ebitdaMargins forwardPE freeCashflow grossMargins \
VLO  6672999936      0.05306  10.225637  4647625216      0.05998

  grossProfits heldPercentInstitutions           industry \
VLO  5487000000      0.80481  Oil & Gas Refining & Marketing

  marketCap operatingCashflow operatingMargins payoutRatio pegRatio \
VLO  47530942464      6498999808      0.0341      0.6312      0.36

  priceToBook priceToSalesTrailing12Months profitMargins quickRatio \
VLO  2.525478      0.377935      0.02019      0.7

  returnOnAssets returnOnEquity revenueGrowth revenuePerShare sector \
VLO  0.04701      0.14702      0.886      308.815  Energy

  sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
VLO  408096000      1.46      2638000128      6.464  13160999936

  totalRevenue trailingPE
VLO  125765001216  18.749195

Adj Close  21dBOLD  21dMA-TP  21dBOLU  90dSMA  90dSDDev  90d_lower  90d_upper
2022-06-17 112.440002 114.972524 130.979841 146.987158 116.34127 14.566462 87.208346 145.474193

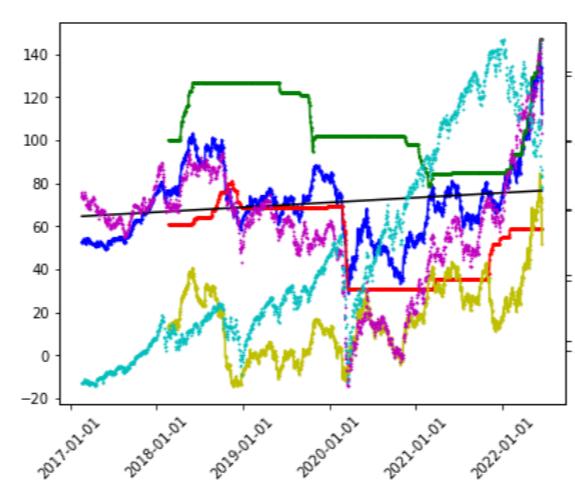
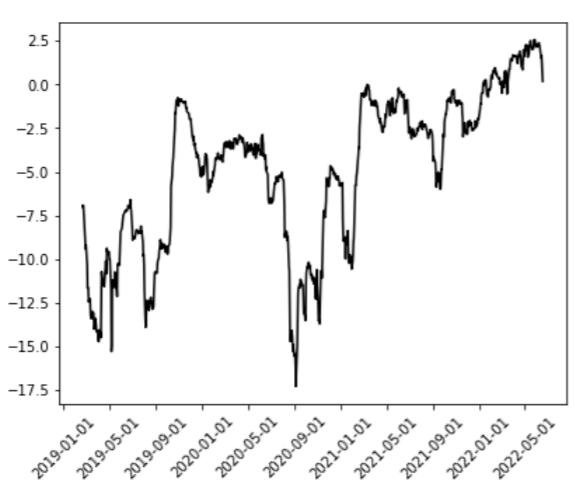
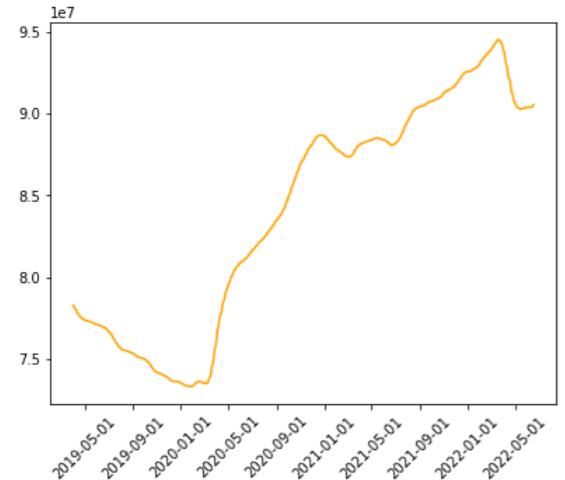
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volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst	
VLO	1.3872	112.440002	90552079.101562	0.691389	0.569718	0.530999

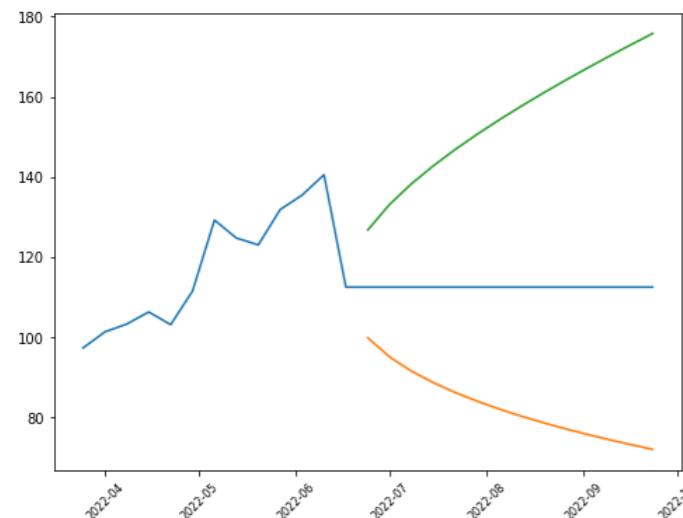
l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

6/22/22, 7:59 AM

Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -287.8400573738469
Index Volume Factor: 1.1835166983613057
Index Risk Trend Factor: -3.791860877423899



ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, None]
best inner cv score, sdev (11 folds): 317.1519111015952 364.58958459008994
test cv mean error, stdev (10 folds): 348.46615032995356 368.0104948880837
sell date: 2022-06-24
expected return: 2.228576469871314e-05
discounted return: 7.428533049580466e-06
quarter return: 1.000683656088519



AnalyzeSP1500-Backup

```

['options', ('2023-01-20', '2024-01-19')]
['sustainability',                               Value
2022-5
palmoil                         False
controversialWeapons            False
gambling                        False
socialScore                      7.23
nuclear                          False
furLeather                       False
alcoholic                         False
gmo                             False
catholic                         False
socialPercentile                None
peerCount                        39
governanceScore                 4.98
environmentPercentile           None
animalTesting                    False
tobacco                          False
totalEsg                          30.94
highestControversy               3
esgPerformance                  OUT_PERF
coal                            False
pesticides                       False
adult                           False
percentile                      65.34
peerGroup                        Refiners & Pipelines
smallArms                        False
environmentScore                 18.74
governancePercentile             None
militaryContract                 False]
symbol: APA
sector: Energy
Index: SP500
vol_30d_2yr: 204531248.4375
Sector 1YMF: 2.8700027465820312
1YMF: 2.8700027465820312
risk trend factor: 0.1813014791288129
    beta currentRatio debtToEquity dividendRate dividendYield \
APA 4.125226      1.227     704.108      0.5      0.0127

earningsGrowth      ebitda ebitdaMargins forwardPE freeCashflow \
APA   4.324 4982000128      0.56569  4.06754  2424875008

grossMargins grossProfits heldPercentInstitutions      industry \
APA   0.67015 5080000000      0.86507 Oil & Gas E&P

marketCap operatingCashflow operatingMargins payoutRatio pegRatio \
APA 13647661056      3716000000      0.40218      0.0339      0.17

priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
APA   1.549638      0.28023      0.882      0.17293

returnOnEquity revenueGrowth revenuePerShare sector sharesOutstanding \
APA   4.69732      0.405      24.063 Energy      338232000

shortRatio totalCash totalCashPerShare totalDebt totalRevenue \
APA   0.82 234000000      0.692 5999000064  8807000064

trailingPE
APA   5.998216

Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDiv 90d_lower 90d_upper
2022-06-17 39.220001 39.703868 46.051746 52.399625 42.904732 3.307398 36.289937 49.519528

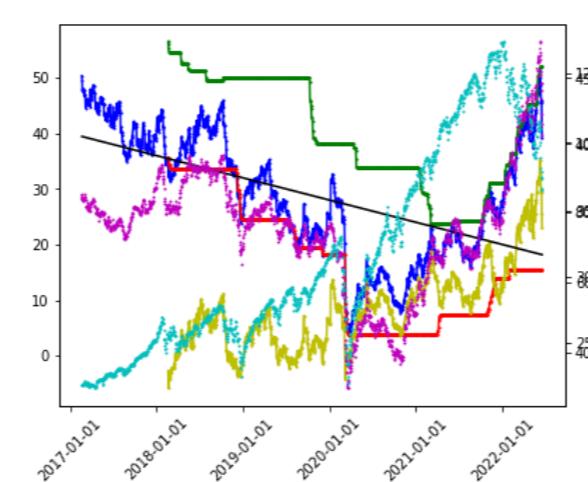
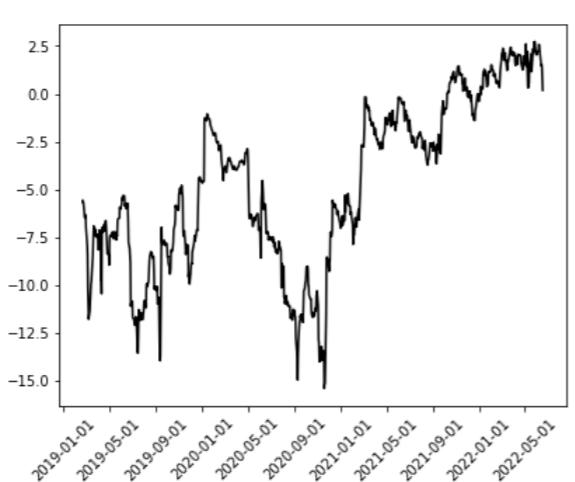
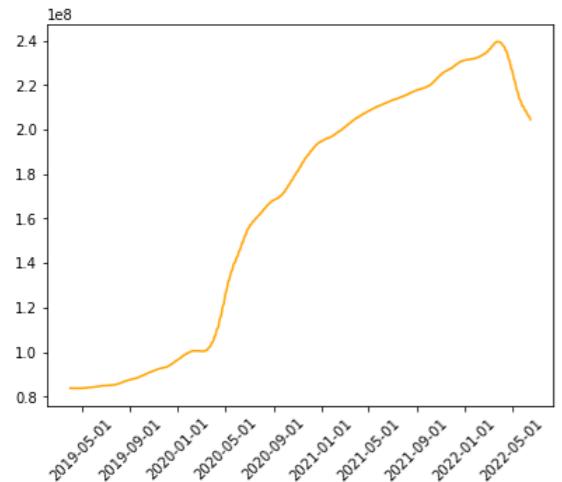
```

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
APA	0.999608	39.220001	204531248.4375	0.713933	0.304265	0.445496

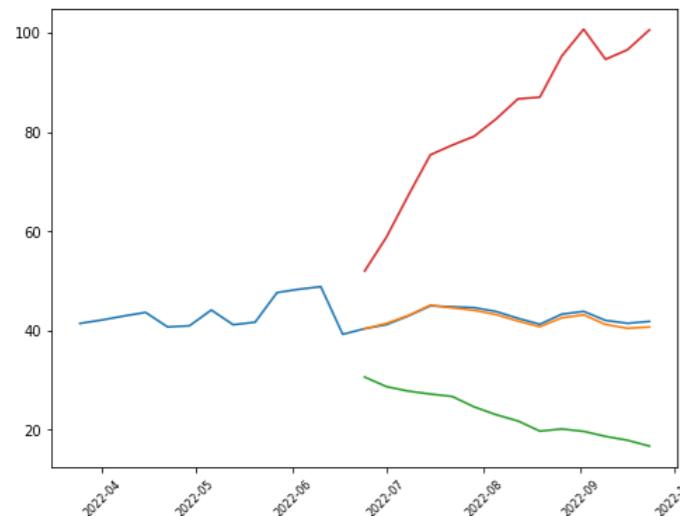
l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

6/22/22, 7:59 AM

Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -287.8400573730469
Index Volume Factor: 1.1835166983613057
Index Risk Trend Factor: -3.791860877423899



ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['mul', 'add', False]
best inner cv score, sdev (11 folds): 47.13054475691343 47.07658485857801
test cv mean error, stdev (10 folds): 51.40174453680588 47.29853216100208
sell date: 2022-07-15
expected return: 0.14622803593529313
discounted return: 0.005702723250525343
quarter return: 1.6873516584818244



AnalyzeSP1500-Backup

```

['options', ('2022-07-15', '2023-01-20', '2024-01-19')]
['sustainability',                                     Value
2021-3
palmoil          False
controversialWeapons  False
gambling          False
socialScore        8.88
nuclear           False
furLeather        False
alcoholic         False
gmo               False
catholic          False
socialPercentile None
peerCount         71
governanceScore   7.96
environmentPercentile None
animalTesting     False
tobacco           False
totalEsg          38.81
highestControversy 2
esgPerformance    OUT_PERF
coal              False
pesticides        False
adult             False
percentile        82.83
peerGroup          Oil & Gas Producers
smallArms          False
environmentScore   21.98
governancePercentile None
militaryContract  False]
symbol: PPC
sector: Consumer Defensive
Index: SP400
vol_30d_2yr: 17241312.5
Sector 1YMF: 1.4799995422363281
1YMF: 1.4799995422363281
risk trend factor: 0.1778845668897103
    beta currentRatio debtToEquity earningsGrowth      ebitda \
PPC  0.943738      1.532      134.448      1.805  1548861056

    ebitdaMargins forwardPE freeCashflow grossMargins grossProfits \
PPC  0.09838  10.284345  873572608  0.10458  1365827000

    heldPercentInstitutions      industry  marketCap operatingCashflow \
PPC  0.18281  Packaged Foods  7736222208  697006016

    operatingMargins payoutRatio pegRatio priceToBook \
PPC  0.0732      0  0.69  2.809146

    priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
PPC  0.491363  0.01342  0.724  0.08575

    returnOnEquity revenueGrowth revenuePerShare      sector \
PPC  0.07645  0.295  64.613  Consumer Defensive

    sharesOutstanding shortRatio totalCash totalCashPerShare  totalDebt \
PPC  24033000  2.88  725539968  3.019  3755959040

    totalRevenue trailingPE
PPC  15744428032  37.128025

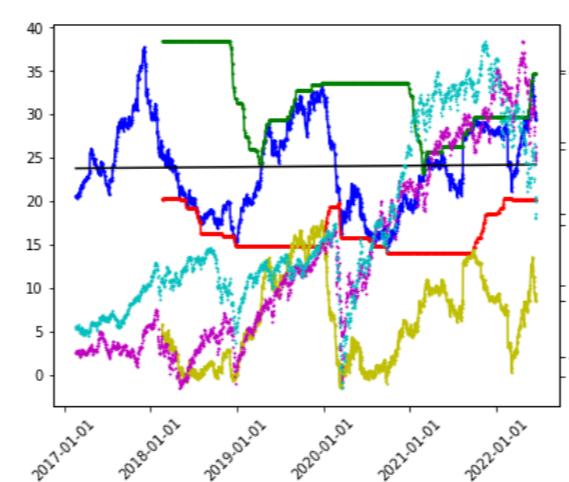
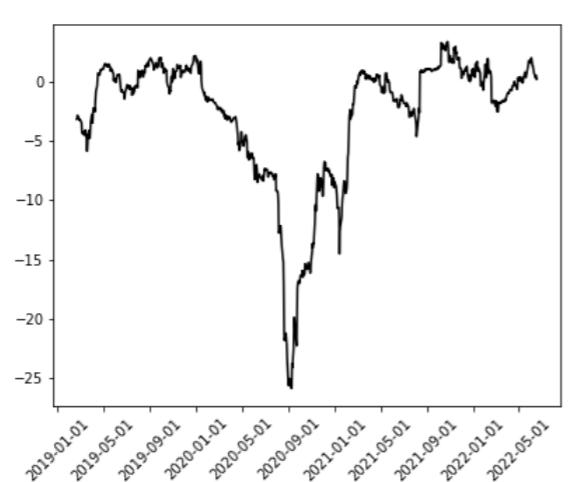
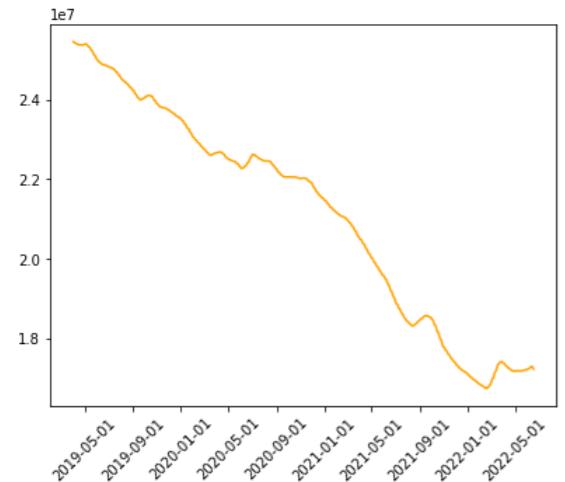
Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper
2022-06-17  29.34  28.165931  31.419048  34.672164  28.426667  2.86898  22.688707  34.164626

```

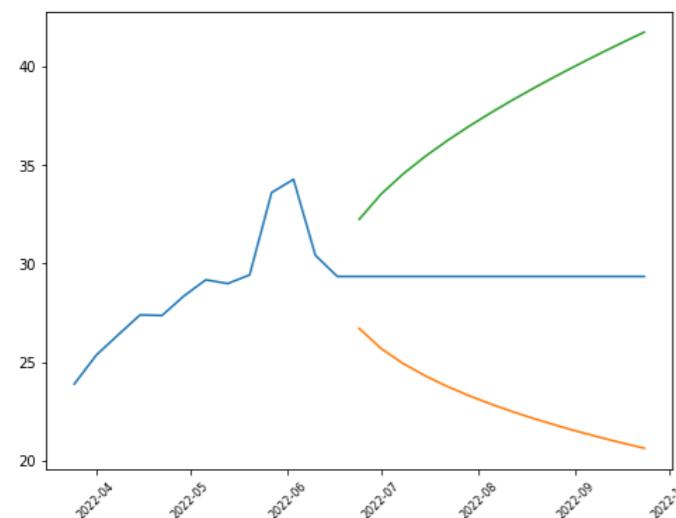
	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
PPC	1.275425	29.34	17241312.5	0.741748	0.282386	0.556574
l axis		r axis				
legend		legend				
blue symbol		magenta sector				
green trailing_1yr_max		cyan index				
red trailing_1yr_min						
orange 30d_vol_2yr						
black risk_trend_factor/linear						
yellow supply_trend_1yr						

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Sector 1YMF: -74.80001831054688
Sector Volume Factor: 1.4135920452708397
Sector Risk Trend Factor: -2.283970024749523
Index 1YMF: -69.05999755859375
Index Volume Factor: 0.5765983741853883
Index Risk Trend Factor: -5.134573474205833



ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, None]
best inner cv score, sdev (11 folds): 26.767895785046264 40.455102663471955
test cv mean error, stdev (10 folds): 28.55364077064964 42.01427290782952
sell date: 2022-06-24
expected return: 3.5831703451015226e-06
discounted return: 1.1943886883969412e-06
quarter return: 1.000109889731145



```
[ 'options', ('2023-01-20',) ]
symbol: MRO
sector: Energy
Index: SP500
vol_30d_2yr: 490057840.234375
Sector 1YMF: 1.5699996948242188
1YMF: 1.5699996948242188
risk trend factor: 0.15110678525882204
    beta currentRatio debtToEquity dividendRate dividendYield \
MRO 2.766666 1.112 38.48 0.32 0.0119

    ebitda ebitdaMargins forwardPE freeCashflow grossMargins \
MRO 3308999936 0.58921 12.704082 1785500032 0.77546

    grossProfits heldPercentInstitutions industry marketCap \
MRO 4355000000 0.802 Oil & Gas E&P 19385571328

    operatingCashflow operatingMargins payoutRatio pegRatio priceToBook \
MRO 3239000064 0.20495 0.0769 0.59 1.819776

    priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
MRO 3.451847 0.16845 1.052 0.04117

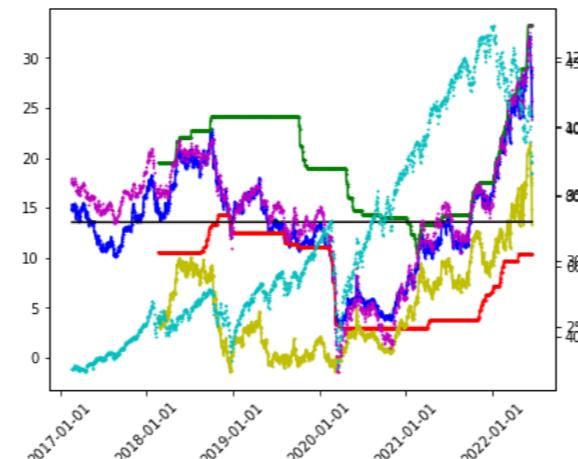
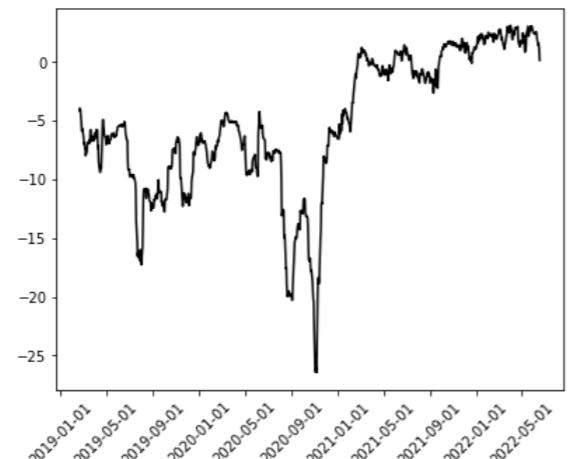
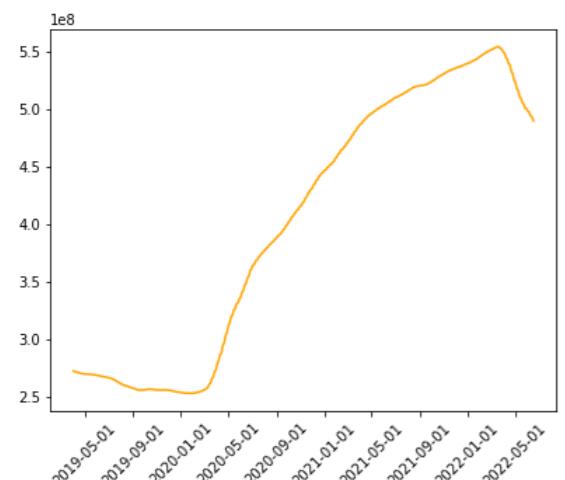
    returnOnEquity revenueGrowth revenuePerShare sector sharesOutstanding \
MRO 0.08905 1.091 7.136 Energy 778537024

    shortRatio totalCash totalCashPerShare totalDebt totalRevenue
MRO 0.93 580000000 0.794 4112000000 5616000000
Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper
2022-06-17 24.15 25.128986 29.471905 33.814823 26.957624 2.372893 22.211838 31.70341
```

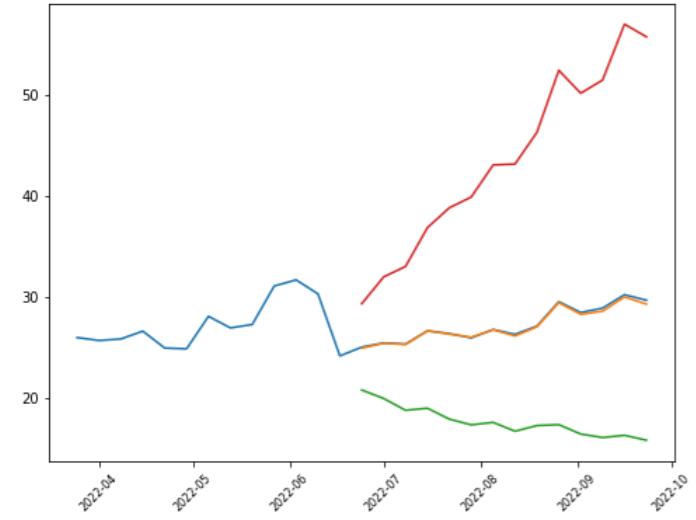
	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
MRO	1.000459	24.15	490057840.234375	0.691969	0.80545	0.53536

l axis		r axis	
legend	legend	legend	legend
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Sector 1YMF: -3.8200732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -287.8400573730469
Index Volume Factor: 1.1835166983613057
Index Risk Trend Factor: -3.791860877423899



```
ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['mul', 'add', False]
best inner cv score, sdev (11 folds): 12.69255970413172 12.658414471165557
test cv mean error, stdev (10 folds): 13.816576070874365 12.742113874455876
sell date: 2022-09-16
expected return: 0.2510304982151105
discounted return: 0.002577656807176032
quarter return: 1.2672374715532024
```



```
[ 'quarterly_balance_sheet', 2021-12-31 2021-09-30 2021-06-30 \
Capital Surplus 7.221000e+09 7.213000e+09 7.201000e+09
Total Liab 6.308000e+09 6.365000e+09 7.166000e+09
Total Stockholder Equity 1.068500e+10 1.079600e+10 1.063400e+10
Other Current Liab 3.680000e+08 4.960000e+08 5.020000e+08
Total Assets 1.699400e+10 1.716100e+10 1.780000e+10
Common Stock 9.370000e+08 9.370000e+08 9.370000e+08
Other Current Assets 2.200000e+07 2.500000e+07 1.900000e+07
Retained Earnings 7.271000e+09 6.669000e+09 6.524000e+09
Other Liab 6.440000e+08 6.420000e+08 6.650000e+08
Treasury Stock -4.743000e+09 -4.023000e+09 -4.028000e+09
Other Assets 1.100000e+08 1.040000e+08 9.300000e+07
Cash 5.800000e+08 4.850000e+08 9.700000e+08
Total Current Liabilities 1.637000e+09 1.676000e+09 1.575000e+09
Short Long Term Debt 3.900000e+07 3.900000e+07 3.500000e+07
Other Stockholder Equity 8.200000e+07 8.200000e+07 7.700000e+07
Property Plant Equipment 1.458500e+10 1.484300e+10 1.511100e+10
Total Current Assets 1.821000e+09 1.655000e+09 2.075000e+09
Long Term Investments 4.770000e+08 5.590000e+08 5.210000e+08
Net Tangible Assets 1.068500e+10 1.079600e+10 1.063400e+10
Net Receivables 1.142000e+09 1.068000e+09 1.008000e+09
Long Term Debt 3.980000e+08 3.983000e+08 4.882000e+08
Inventory 7.700000e+07 7.700000e+07 7.800000e+07
Accounts Payable 1.110000e+09 1.028000e+09 9.370000e+08

2021-03-31
Capital Surplus 7.195000e+09
Total Liab 7.562000e+09
Total Stockholder Equity 1.067100e+10
Other Current Liab 3.810000e+08
Total Assets 1.823300e+10
Common Stock 9.370000e+08
Other Current Assets 2.600000e+07
Retained Earnings 6.540000e+09
Other Liab 6.950000e+08
Treasury Stock -4.001000e+09
Other Assets 9.600000e+07
Cash 1.125000e+09
Total Current Liabilities 1.899000e+09
Short Long Term Debt 5.010000e+08
Other Stockholder Equity 1.120000e+08
Property Plant Equipment 1.542500e+10
Total Current Assets 2.150000e+09
Long Term Investments 5.620000e+08
Net Tangible Assets 1.067100e+10
Net Receivables 9.210000e+08
Long Term Debt 4.910000e+09
Inventory 7.800000e+07
Accounts Payable 9.180000e+08 ]
[ 'quarterly_cashflow', 2021-12-31 2021-09-30 \
Investments 4.600000e+07 9.000000e+06
Change To Liabilities 1.410000e+08 1.070000e+08
Total Cashflows From Investing Activities -2.820000e+08 -2.650000e+08
Total Cash From Financing Activities -7.690000e+08 -1.036000e+09
Change To Operating Activities -2.000000e+07 -7.000000e+06
Net Income 6.490000e+08 1.840000e+08
Change In Cash 9.500000e+07 -4.850000e+08
Repurchase Of Stock -7.240000e+08 -1.000000e+06
Total Cash From Operating Activities 1.146000e+09 8.160000e+08
Depreciation 4.630000e+08 5.830000e+08
Dividends Paid -4.700000e+07 -3.900000e+07
Change To Account Receivables -7.600000e+07 -6.000000e+07
Other Cashflows From Financing Activities 2.000000e+06 -9.600000e+07
Change To Netincome -1.100000e+07 8.000000e+06
Capital Expenditures -2.740000e+08 -2.890000e+08
Net Borrowings NaN -9.000000e+08
Other Cashflows From Investing Activities NaN 1.000000e+06
Change To Inventory NaN 1.000000e+06

2021-06-30 2021-03-31
Investments 6000000.0 6000000.0
Change To Liabilities 2000000.0 10100000.0
Total Cashflows From Investing Activities -256000000.0 -207000000.0
Total Cash From Financing Activities -554000000.0 -32000000.0
Change To Operating Activities 12000000.0 61000000.0
Net Income 16000000.0 97000000.0
Change In Cash -155000000.0 383000000.0
Repurchase Of Stock -1000000.0 -900000.0
Total Cash From Operating Activities 655000000.0 622000000.0
Depreciation 60000000.0 51200000.0
Dividends Paid -32000000.0 -23000000.0
Change To Account Receivables -78000000.0 -175000000.0
Other Cashflows From Financing Activities -22000000.0 -22000000.0
Change To Netincome 85000000.0 28000000.0
Capital Expenditures -274000000.0 -209000000.0
Net Borrowings -500000000.0 -500000000.0

```

```

Other Cashflows From Investing Activities 1000000.0 -1000000.0
Change To Inventory 1000000.0 -2000000.0 ]
['quarterly_earnings',
Quarter
1Q2021 118000000 97000000
2Q2021 125900000 16000000
3Q2021 143900000 18400000
4Q2021 173800000 64900000]
['quarterly_financials',
Research Development None None
Effect Of Accounting Charges None None
Income Before Tax 683000000.0 188000000.0
Minority Interest None None
Net Income 649000000.0 184000000.0
Selling General Administrative 61000000.0 70000000.0
Gross Profit 1393000000.0 1089000000.0
Ebit 755000000.0 254000000.0
Operating Income 755000000.0 254000000.0
Other Operating Expenses 94000000.0 167000000.0
Interest Expense -74000000.0 -57000000.0
Extraordinary Items None None
Non Recurring None None
Other Items None None
Income Tax Expense 34000000.0 4000000.0
Total Revenue 1738000000.0 1439000000.0
Total Operating Expenses 983000000.0 1185000000.0
Cost Of Revenue 345000000.0 35000000.0
Total Other Income Expense Net -72000000.0 -65000000.0
Discontinued Operations None None
Net Income From Continuing Ops 649000000.0 184000000.0
Net Income Applicable To Common Shares 649000000.0 184000000.0

2021-06-30 2021-03-31
Research Development None None
Effect Of Accounting Charges None None
Income Before Tax 26000000.0 107000000.0
Minority Interest None None
Net Income 16000000.0 97000000.0
Selling General Administrative 69000000.0 75000000.0
Gross Profit 966000000.0 907000000.0
Ebit 54000000.0 87000000.0
Operating Income 54000000.0 87000000.0
Other Operating Expenses 240000000.0 227000000.0
Interest Expense -59000000.0 -13000000.0
Extraordinary Items None None
Non Recurring None None
Other Items None None
Income Tax Expense 10000000.0 10000000.0
Total Revenue 1259000000.0 1180000000.0
Total Operating Expenses 1205000000.0 1093000000.0
Cost Of Revenue 293000000.0 273000000.0
Total Other Income Expense Net -28000000.0 2000000.0
Discontinued Operations None None
Net Income From Continuing Ops 16000000.0 97000000.0
Net Income Applicable To Common Shares 16000000.0 97000000.0 ]
['mutualfund_holders',
Holder Shares Date Reported % Out \
0 Vanguard/Windsor II 26018487 2022-01-30 0.0368
1 Select Sector SPDR Fund-Energy Select 22895120 2022-01-30 0.0324
2 Vanguard Total Stock Market Index Fund 22131478 2021-12-30 0.0313
3 Vanguard Small-Cap Index Fund 19611815 2021-12-30 0.0277
4 Vanguard 500 Index Fund 16486851 2021-12-30 0.0233
5 Vanguard Small Cap Value Index Fund 12430773 2021-12-30 0.0176
6 Fidelity Low-Priced Stock Fund 12282677 2022-02-27 0.0174
7 SPDR S&P 500 ETF Trust 8364980 2022-01-30 0.0118
8 Fidelity 500 Index Fund 7972838 2022-02-27 0.0113
9 Invesco Comstock Fd 7808667 2022-01-30 0.0110

Value
0 506579941
1 445767986
2 363398868
3 322026002
4 270714093
5 204113292
6 277097193
7 162848637
8 179867225
9 152034746 ]
['options', ('2022-07-15', '2022-09-16', '2023-01-20', '2024-01-19')]
['sustainability',
2022-5
palmoil False
controversialWeapons False
gambling False
socialScore 10.01
nuclear False

```

```

furLeather      False
alcoholic       False
gmo            False
catholic        False
socialPercentile 0
peerCount       66
governanceScore 8.13
environmentPercentile 0
animalTesting   False
tobacco         False
totalEsg        42.05
highestControversy 2
esgPerformance None
coal            False
pesticides      False
adult           False
percentile     90.8
peerGroup       Oil & Gas Producers
smallArms       False
environmentScore 23.91
governancePercentile 0
militaryContract False]
symbol: DVN
sector: Energy
Index: SP500
vol_30d_2yr: 237878397.65625
Sector 1YMF: 3.9099979400634766
1YMF: 3.9099979400634766
risk trend factor: 0.14878225091792957
    beta currentRatio debtToEquity dividendRate dividendYield \
DVN 2.588475      1.325      71.489      5.08      0.0876

earningsGrowth    ebitda ebitdaMargins forwardPE freeCashflow \
DVN      3.625 6653000192      0.4454 6.504833 3098249984

grossMargins grossProfits heldPercentInstitutions industry \
DVN      0.58211 7414000000      0.84994 Oil & Gas E&P

marketCap operatingCashflow operatingMargins payoutRatio pegRatio \
DVN 39969599488      6144000000      0.29732      0.4991      0.35

priceToBook priceToSalesTrailing12Months profitMargins quickRatio \
DVN 4.302359      2.675879      0.24027      1.188

returnOnAssets returnOnEquity revenueGrowth revenuePerShare sector \
DVN 0.13144      0.4031      0.74      22.47 Energy

sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
DVN 6600000000      1.41 2459000064      3.726 6744999936

totalRevenue trailingPE
DVN 14936999936      11.3685

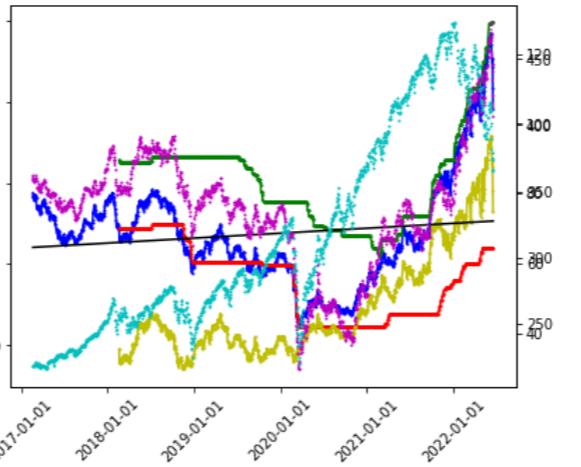
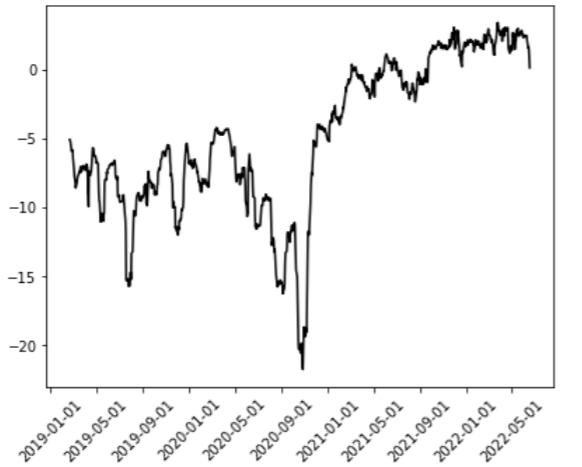
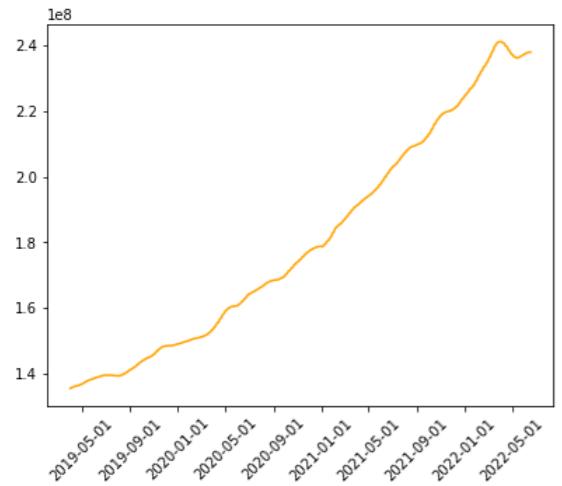
Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSD 90d_lower 90d_upper
2022-06-17 58.02 63.021796 72.270498 81.519201 64.791123 6.379249 52.032625 77.549622

```

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
DVN	1.104104	58.02	237878397.65625	0.701688	0.92716	0.547332

	l axis	r axis	
legend	legend	legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

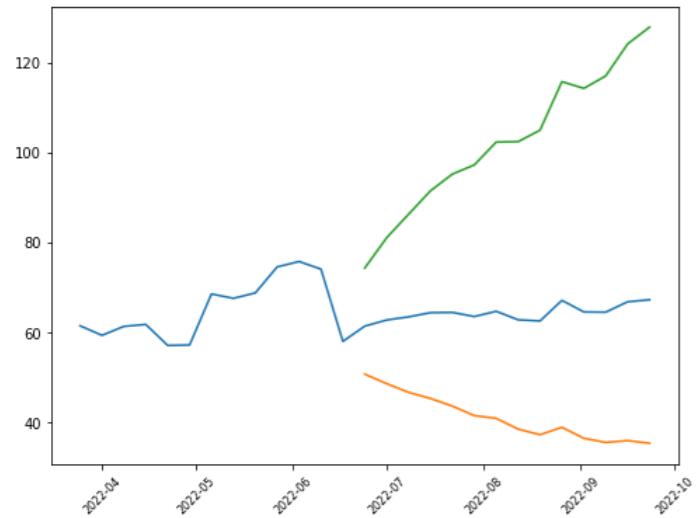
Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -287.8400573730469
Index Volume Factor: 1.1835166983613057
Index Risk Trend Factor: -3.791860877423899



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', None]
best inner cv score, sdev (11 folds): 63.96047087281792 58.72627053824724
test cv mean error, stdev (10 folds): 69.67555297000216 58.60349149219175
sell date: 2022-09-23
expected return: 0.15932019065784372
discounted return: 0.0015739372431027299
quarter return: 1.1556793940394725

```



```

['options', ('2022-07-15', '2023-01-20', '2024-01-19')]
[sustainability]                                Value
2022-5
palmoil                         False
controversialWeapons            False
gambling                         False
socialScore                      8.78
nuclear                          False
furLeather                       False
alcoholic                         False
gmo                               False
catholic                          False
socialPercentile                None
peerCount                         66
governanceScore                 7.86
environmentPercentile           None
animalTesting                     False
tobacco                           False
totalEsg                          34.39
highestControversy                2
esgPerformance                   OUT_PERF
coal                             False
pesticides                        False
adult                            False
percentile                       76.03
peerGroup                         Oil & Gas Producers
smallArms                         False
environmentScore                  17.75
governancePercentile             None
militaryContract                 False]
symbol: UTHR
sector: Healthcare
Index: SP400
vol_30d_2yr: 8360250.78125
Sector 1YMF: 8.760009765625
1YMF: 8.760009765625
risk trend factor: 0.13940181852529768
    beta currentRatio debtToEquity earningsGrowth      ebitda ebitdaMargins \
UTHR  0.675      7.608     20.685       0.073  736800000      0.43714

forwardPE freeCashflow grossMargins grossProfits \
UTHR 14.474382   403587488     0.92732  1563000000

heldPercentInstitutions      industry      marketCap operatingCashflow \
UTHR  0.9712  Biotechnology  10306152448      598200000

operatingMargins payoutRatio pegRatio priceToBook \
UTHR  0.40753      0      5.49     2.69021

priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
UTHR  6.114596     0.28229     6.972      0.08776

returnOnEquity revenueGrowth revenuePerShare      sector \
UTHR  0.1294      0.079     37.539  Healthcare

sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
UTHR  45036500      2.9  1930700032      42.779  818899968

totalRevenue trailingPE
UTHR 1685500032  23.080181

Adj Close  21dBOLD  21dMA-TP  21dBOLU  90dSMA  90dSDev  90d_lower  90d_upper

```

2022-06-17 219.380005 194.589531 219.462223 244.334915 195.494921 19.533079 156.428764 234.561078

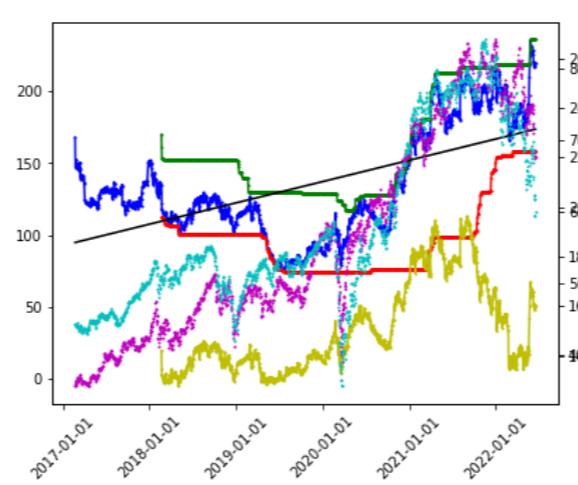
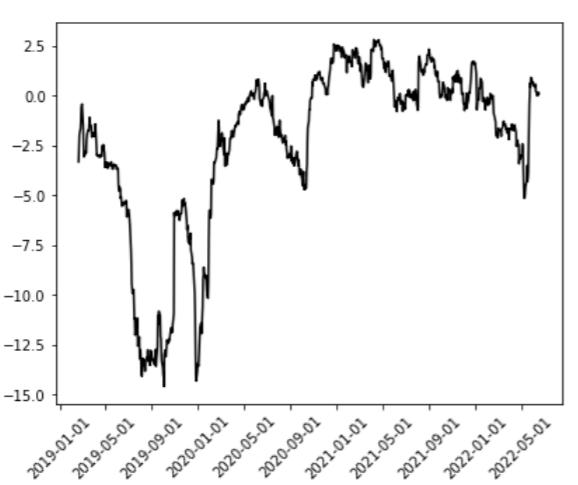
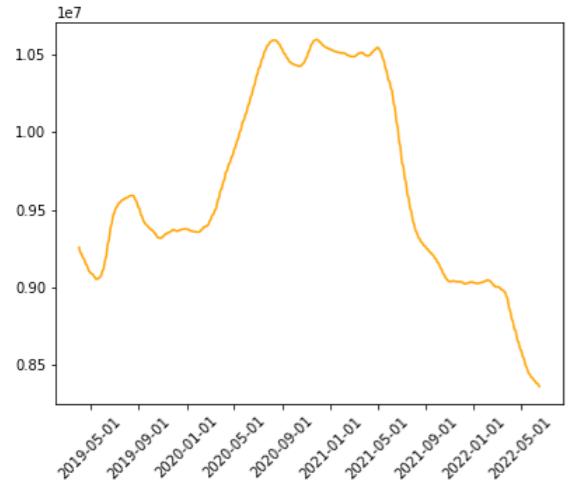
volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
---------------	----------	-------------	---------	-----	-------

UTHR 1.481235 219.380005 8360250.78125 0.878858 0.826178 0.414478

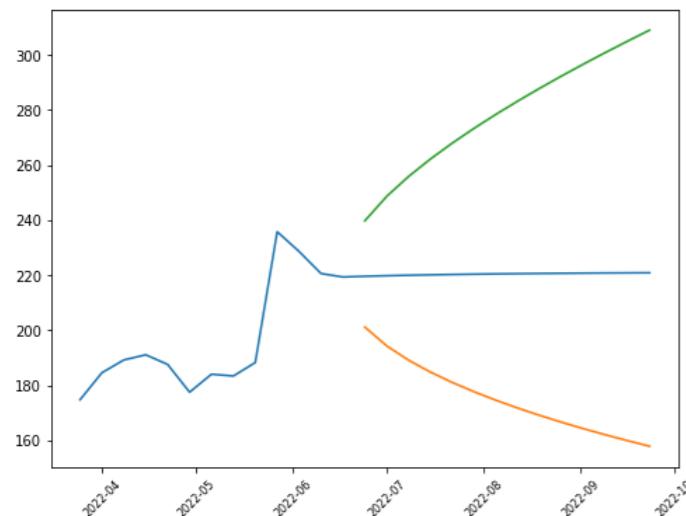
i axis	r axis
legend	legend
blue symbol	magenta sector
green trailing_1yr_max	cyan index
red trailing_1yr_min	
orange 30d_vol_2yr	
black risk_trend_factor/linear	
yellow supply_trend_1yr	

6/22/22, 7:59 AM

Sector 1YMF: -122.20997619628906
Sector Volume Factor: 1.2238851152317325
Sector Risk Trend Factor: -3.3236323632363236
Index 1YMF: -69.05999755859375
Index Volume Factor: 0.5765983741853883
Index Risk Trend Factor: -5.134573474205833



ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, 'add', True]
best inner cv score, sdev (11 folds): 531.968301599211 452.06538306240753
test cv mean error, stdev (10 folds): 561.1667761631822 464.1350765775999
sell date: 2022-09-23
expected return: 0.0070243026096433545
discounted return: 7.446816750089624e-05
quarter return: 1.0068743368524853



AnalyzeSP1500-Backup

	2021-12-31	2021-09-30	2021-06-30	\
['quarterly_balance_sheet',				
Intangible Assets	1.660000e+07	1.670000e+07	1.670000e+07	
Capital Surplus	2.245400e+09	2.225500e+09	2.196500e+09	
Total Liab	1.210200e+09	1.219200e+09	1.205400e+09	
Total Stockholder Equity	3.958900e+09	3.829700e+09	3.639500e+09	
Deferred Long Term Liab	6.900000e+06	7.500000e+06	8.100000e+06	
Other Current Liab	7.100000e+06	2.600000e+07	2.480000e+07	
Total Assets	5.169100e+09	5.048900e+09	4.844900e+09	
Common Stock	7.000000e+05	7.000000e+05	7.000000e+05	
Other Current Assets	1.004000e+08	7.600000e+07	8.710000e+07	
Retained Earnings	4.315000e+09	4.202800e+09	4.049100e+09	
Other Liab	8.900000e+07	9.920000e+07	9.400000e+07	
Good Will	2.800000e+07	2.800000e+07	2.800000e+07	
Treasury Stock	-2.602200e+09	-2.599300e+09	-2.597800e+09	
Other Assets	3.390000e+08	3.518000e+08	3.574000e+08	
Cash	8.948000e+08	9.085000e+08	9.422000e+08	
Total Current Liabilities	3.054000e+08	3.200000e+08	3.114000e+08	
Deferred Long Term Asset Charges	2.619000e+08	2.739000e+08	2.642000e+08	
Other Stockholder Equity	-2.300000e+07	-2.010000e+07	-1.860000e+07	
Property Plant Equipment	7.809000e+08	7.267000e+08	7.157000e+08	
Total Current Assets	2.323600e+09	2.385900e+09	2.317900e+09	
Long Term Investments	1.681000e+09	1.539800e+09	1.409200e+09	
Net Tangible Assets	3.914300e+09	3.785000e+09	3.594800e+09	
Short Term Investments	1.035900e+09	1.091900e+09	1.025300e+09	
Net Receivables	1.987000e+08	2.128000e+08	1.734000e+08	
Long Term Debt	8.000000e+08	8.000000e+08	8.000000e+08	
Inventory	9.380000e+07	9.670000e+07	8.990000e+07	
Accounts Payable	3.800000e+06	2.105000e+08	1.898000e+08	

2021-03-31

Intangible Assets	1.670000e+07
Capital Surplus	2.173200e+09
Total Liab	1.195600e+09
Total Stockholder Equity	3.445400e+09
Deferred Long Term Liab	8.700000e+06
Other Current Liab	3.030000e+07
Total Assets	4.641000e+09
Common Stock	7.000000e+05
Other Current Assets	4.970000e+07
Retained Earnings	3.867500e+09
Other Liab	9.320000e+07
Good Will	2.800000e+07
Treasury Stock	-2.596000e+09
Other Assets	3.500000e+08
Cash	8.323000e+08
Total Current Liabilities	3.024000e+08
Deferred Long Term Asset Charges	2.636000e+08
Other Stockholder Equity	-1.680000e+07
Property Plant Equipment	7.137000e+08
Total Current Assets	2.014300e+09
Long Term Investments	1.518300e+09
Net Tangible Assets	3.400700e+09
Short Term Investments	8.990000e+08
Net Receivables	1.411000e+08
Long Term Debt	8.000000e+08
Inventory	9.220000e+07
Accounts Payable	1.650000e+08

]

2021-12-31 2021-09-30 \

['quarterly_cashflow',			
Investments	-125200000.0	-220400000.0	
Change To Liabilities	-34500000.0	19800000.0	
Total Cashflows From Investing Activities	-195800000.0	-235900000.0	
Total Cash From Financing Activities	7500000.0	16600000.0	
Change To Operating Activities	-12600000.0	-18600000.0	
Issuance Of Stock	7700000.0	16800000.0	
Net Income	112200000.0	162700000.0	
Change In Cash	-13700000.0	-33700000.0	
Repurchase Of Stock	-20000.0	-20000.0	
Total Cash From Operating Activities	174600000.0	185600000.0	
Depreciation	12600000.0	12400000.0	
Change To Inventory	-10000.0	-8200000.0	
Change To Account Receivables	14100000.0	-39300000.0	
Change To Netincome	82900000.0	56800000.0	
Capital Expenditures	-70600000.0	-23300000.0	
Other Cashflows From Investing Activities	Nan	7800000.0	

2021-06-30 2021-03-31

Investments	-24800000.0	43000000.0
Change To Liabilities	27200000.0	-25000000.0
Total Cashflows From Investing Activities	-48900000.0	-6300000.0
Total Cash From Financing Activities	10600000.0	10100000.0
Change To Operating Activities	-7150000.0	-10200000.0
Issuance Of Stock	10800000.0	20300000.0
Net Income	172600000.0	28300000.0
Change In Cash	109900000.0	93600000.0
Repurchase Of Stock	-20000.0	-10200000.0
Total Cash From Operating Activities	148200000.0	89800000.0

```

Depreciation          12400000.0 12500000.0
Change To Inventory   3000000.0 -2200000.0
Change To Account Receivables -32400000.0 16300000.0
Change To Netincome    36900000.0 70100000.0
Capital Expenditures -16300000.0 -10600000.0
Other Cashflows From Investing Activities -7800000.0 -7800000.0 ]
['quarterly_earnings',      Revenue   Earnings
Quarter
1Q2021 37910000 28300000
2Q2021 44650000 17260000
3Q2021 44470000 16270000
4Q2021 41520000 11220000]

```

```

['quarterly_financials',
Research Development     82900000.0 79200000.0 74300000.0
Effect Of Accounting Charges None   None   None
Income Before Tax        140500000.0 204400000.0 216500000.0
Minority Interest          None   None   None
Net Income                112200000.0 162700000.0 172600000.0
Selling General Administrative 128500000.0 109100000.0 112800000.0
Gross Profit              380600000.0 417000000.0 409300000.0
Ebit                      169200000.0 228700000.0 222200000.0
Operating Income           169200000.0 228700000.0 222200000.0
Other Operating Expenses   None   None   None
Interest Expense           -4700000.0 -4600000.0 -4700000.0
Extraordinary Items         None   None   None
Non Recurring               None   None   None
Other Items                 None   None   None
Income Tax Expense          28300000.0 41700000.0 43900000.0
Total Revenue              415200000.0 444700000.0 446500000.0
Total Operating Expenses    246000000.0 216000000.0 224300000.0
Cost Of Revenue             34600000.0 27700000.0 37200000.0
Total Other Income Expense Net -28700000.0 -24300000.0 -5700000.0
Discontinued Operations     None   None   None
Net Income From Continuing Ops 112200000.0 162700000.0 172600000.0
Net Income Applicable To Common Shares 112200000.0 162700000.0 172600000.0

```

```

2021-03-31
Research Development     174800000.0
Effect Of Accounting Charges None
Income Before Tax        32500000.0
Minority Interest          None
Net Income                28300000.0
Selling General Administrative 115700000.0
Gross Profit              356100000.0
Ebit                      65600000.0
Operating Income           65600000.0
Other Operating Expenses   None
Interest Expense           -4600000.0
Extraordinary Items         None
Non Recurring               None
Other Items                 None
Income Tax Expense          4200000.0
Total Revenue              379100000.0
Total Operating Expenses    313500000.0
Cost Of Revenue             23000000.0
Total Other Income Expense Net -33100000.0
Discontinued Operations     None
Net Income From Continuing Ops 28300000.0
Net Income Applicable To Common Shares 28300000.0 ]

```

```

['mutualfund_holders',
0 Fidelity Series Intrinsic Opportunities Fund 1375000 2022-02-27
1 Vanguard Total Stock Market Index Fund 1279074 2021-12-30
2 iShares Core S&P Midcap ETF 1250081 2022-01-30
3 Vanguard Small-Cap Index Fund 1014327 2021-12-30
4 Vanguard Small Cap Value Index Fund 719085 2021-12-30
5 Capitol Ser Tr-Fuller & Thaler Behavioral Smal... 622901 2022-03-30
6 Hartford Mid Cap Fund 612105 2022-01-30
7 Vanguard Extended Market Index Fund 595370 2021-12-30
8 Fidelity Select Portfolios - Biotechnology 423409 2022-02-27
9 SPDR S&P Mid Cap 400 ETF Trust 386544 2022-01-30

```

	% Out	Value
0	0.0304	228525000
1	0.0282	276382309
2	0.0276	252353851
3	0.0224	219175778
4	0.0159	155379886
5	0.0138	111754668
6	0.0135	123565636
7	0.0131	128647549
8	0.0093	70370575
9	0.0085	78031637]

```

['options', ('2022-08-19',)]
['sustainability',      Value
2022-5
palmOil                 False

```

```

controversialWeapons      False
gambling                 False
socialScore               16.62
nuclear                  False
furLeather                False
alcoholic                 False
gmo                       False
catholic                  False
socialPercentile          0
peerCount                 83
governanceScore           7.41
environmentPercentile     0
animalTesting              True
tobacco                   False
totalEsg                  25.71
highestControversy        1
esgPerformance            None
coal                      False
pesticides                 False
adult                     False
percentile                45.83
peerGroup                 Pharmaceuticals
smallArms                 False
environmentScore           1.68
governancePercentile      0
militaryContract          False]
symbol: VIVO
sector: Healthcare
Index: SP600
vol_30d_2yr: 11730103.3203125
Sector 1YMF: 0.6100006103515625
1YMF: 0.6100006103515625
risk trend factor: 0.10971235052954659
    beta currentRatio debtToEquity earningsGrowth   ebitda \
VIVO  0.340686      4.077     16.102      -0.426  100282000

    ebitdaMargins forwardPE freeCashflow grossMargins grossProfits \
VIVO  0.32006   27.102802   33777248     0.68245   201148000

    heldPercentInstitutions       industry   marketCap \
VIVO  1.05634  Diagnostics & Research  1261868288

    operatingCashflow operatingMargins payoutRatio pegRatio priceToBook \
VIVO  77299000      0.26983      0.0     1.06   3.830405

    priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
VIVO  4.027411      0.1914      2.343      0.11974

    returnOnEquity revenueGrowth revenuePerShare      sector \
VIVO  0.19218      -0.049      7.229  Healthcare

    sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
VIVO  43512700      6.49   72729000      1.67  55586000

    totalRevenue trailingPE
VIVO  313320000  17.901234

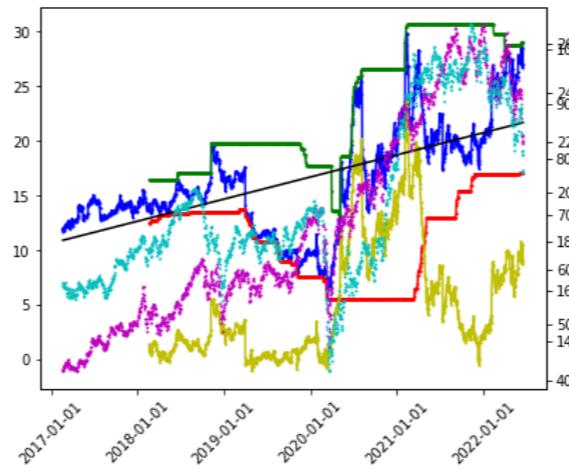
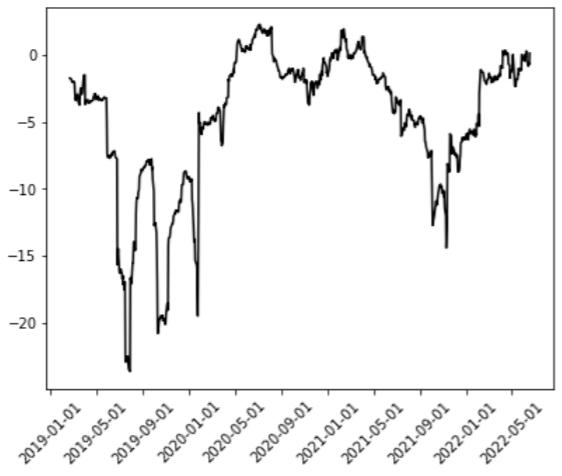
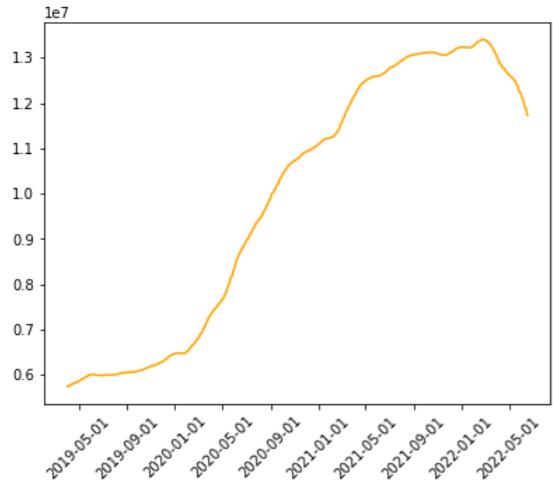
Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper
2022-06-17  28.5  25.427799  27.012222  28.596646  26.44746  1.162243  24.122974  28.771947

```

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
VIVO	0.591657	28.5	11730103.320312	0.878325	0.565494	0.431737

	l axis	r axis
blue	symbol	magenta
green	trailing_1yr_max	cyan
red	trailing_1yr_min	
orange	30d_vol_2yr	
black	risk_trend_factor/linear	
yellow	supply_trend_1yr	

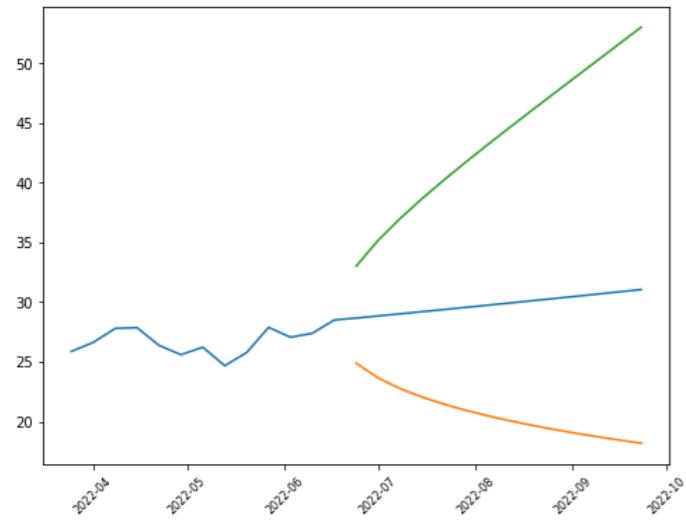
Sector 1YMF: -122.20997619628906
Sector Volume Factor: 1.2238851152317325
Sector Risk Trend Factor: -3.3236323632363236
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, 'add', False]
best inner cv score, sdev (11 folds): 13.788280574159307 13.738014667029052
test cv mean error, stdev (10 folds): 15.089252592170117 13.747310526428125
sell date: 2022-09-23
expected return: 0.08928277295053302
discounted return: 0.0009101956065464822
quarter return: 1.0873025561489822

```



```
[{'quarterly_balance_sheet': 2021-12-31 2021-09-30 2021-06-30 \
Intangible Assets 81658000.0 84151000.0 76744000.0
Capital Surplus 148623000.0 147403000.0 146304000.0
Total Liab 113421000.0 121420000.0 124414000.0
Total Stockholder Equity 345219000.0 328302000.0 322156000.0
Other Current Liab 6631000.0 4486000.0 2644000.0
Total Assets 458640000.0 449722000.0 446570000.0
Retained Earnings 196041000.0 180701000.0 174044000.0
Other Liab 9946000.0 10128000.0 32990000.0
Good Will 114713000.0 114668000.0 115315000.0
Treasury Stock 555000.0 198000.0 1808000.0
Other Assets 9899000.0 9096000.0 8468000.0
Cash 72729000.0 49771000.0 70012000.0
Total Current Liabilities 49946000.0 47157000.0 36702000.0
Deferred Long Term Asset Charges 8813000.0 8731000.0 8673000.0
Other Stockholder Equity 555000.0 198000.0 1808000.0
Property Plant Equipment 48717000.0 49000000.0 51064000.0
Total Current Assets 283653000.0 192807000.0 194979000.0
Net Tangible Assets 148848000.0 129483000.0 130097000.0
Net Receivables 44300000.0 53568000.0 42258000.0
Long Term Debt 50000000.0 60203000.0 50245000.0
Inventory 74198000.0 76842000.0 71813000.0
Accounts Payable 16293000.0 11701000.0 13103000.0

2021-03-31
Intangible Assets 78834000.0
Capital Surplus 145338000.0
Total Liab 129696000.0
Total Stockholder Equity 309473000.0
Other Current Liab 13406000.0
Total Assets 439169000.0
Retained Earnings 162375000.0
Other Liab 24577000.0
Good Will 115296000.0
Treasury Stock 1760000.0
Other Assets 8482000.0
Cash 63374000.0
Total Current Liabilities 50310000.0
Deferred Long Term Asset Charges 8017000.0
Other Stockholder Equity 1760000.0
Property Plant Equipment 48263000.0
Total Current Assets 188294000.0
Net Tangible Assets 115343000.0
Net Receivables 44895000.0
Long Term Debt 50254000.0
Inventory 72534000.0
Accounts Payable 16714000.0 ]
['quarterly_cashflow', 2021-12-31 2021-09-30 2021-06-30 \
Change To Liabilities 1018000.0 8598000.0 -2329000.0
Total Cashflows From Investing Activities -1708000.0 -18990000.0 -4452000.0
Net Borrowings -10000000.0 4703000.0 4703000.0
Total Cash From Financing Activities -11087000.0 -15184000.0 87000.0
Change To Operating Activities 200000.0 -1746000.0 -3405000.0
Issuance Of Stock 80000.0 113000.0 87000.0
Net Income 15340000.0 6657000.0 11669000.0
Change In Cash 22958000.0 -20241000.0 6638000.0
Repurchase Of Stock -763000.0 -763000.0 -763000.0
Effect Of Exchange Rate 198000.0 -546000.0 108000.0
Total Cash From Operating Activities 35555000.0 14479000.0 10895000.0
Depreciation 4183000.0 4104000.0 3747000.0
Change To Inventory 2093000.0 4031000.0 354000.0
Change To Account Receivables 9424000.0 -10403000.0 2904000.0
Other Cashflows From Financing Activities -404000.0 -20000000.0 -20000000.0
Change To Netincome 2184000.0 1250000.0 -2426000.0
Capital Expenditures -1708000.0 -1905000.0 -4452000.0
Other Cashflows From Investing Activities NaN 1500000.0 1500000.0

2021-03-31
Change To Liabilities 5903000.0
Total Cashflows From Investing Activities -9869000.0
Net Borrowings -8824000.0
Total Cash From Financing Activities -5972000.0
Change To Operating Activities -1242000.0
Issuance Of Stock 2852000.0
Net Income 26302000.0
Change In Cash 181000.0
Repurchase Of Stock -763000.0
Effect Of Exchange Rate -348000.0
Total Cash From Operating Activities 16370000.0
Depreciation 3706000.0
Change To Inventory -6244000.0
Change To Account Receivables -3491000.0
Other Cashflows From Financing Activities -20000000.0
Change To Netincome -1834000.0
Capital Expenditures -9869000.0
Other Cashflows From Investing Activities 1500000.0 ]
```

```
[{'quarterly_earnings':          Revenue   Earnings
Quarter
1Q2021  85264000  26302000
2Q2021  63511000  11669000
3Q2021  76204000  6657000
4Q2021  88341000  15340000]
[{'quarterly_financials':        2021-12-31  2021-09-30  2021-06-30 \
Research Development           6194000.0  6112000.0  6083000.0
Effect Of Accounting Charges  None       None       None
Income Before Tax              19751000.0 7856000.0  15295000.0
Minority Interest               None       None       None
Net Income                      15340000.0 6657000.0  11669000.0
Selling General Administrative  22401000.0 19724000.0 18173000.0
Gross Profit                     49159000.0 44717000.0 37111000.0
Ebit                           20564000.0 18881000.0 12855000.0
Operating Income                20564000.0 18881000.0 12855000.0
Other Operating Expenses        None       None       None
Interest Expense                 -372000.0 -443000.0 -444000.0
Extraordinary Items             None       None       None
Non Recurring                  None       None       None
Other Items                      None       None       None
Income Tax Expense               4411000.0 1199000.0 3626000.0
Total Revenue                    88341000.0 76204000.0 63511000.0
Total Operating Expenses         67777000.0 57323000.0 50656000.0
Cost Of Revenue                  39182000.0 31487000.0 26400000.0
Total Other Income Expense Net  -813000.0 -11025000.0 2440000.0
Discontinued Operations          None       None       None
Net Income From Continuing Ops  15340000.0 6657000.0 11669000.0
Net Income Applicable To Common Shares  15340000.0 6657000.0 11669000.0
```

```
2021-03-31
Research Development           6065000.0
Effect Of Accounting Charges  None
Income Before Tax              33052000.0
Minority Interest               None
Net Income                      26302000.0
Selling General Administrative 19465000.0
Gross Profit                     57772000.0
Ebit                           32242000.0
Operating Income                32242000.0
Other Operating Expenses        None
Interest Expense                 -472000.0
Extraordinary Items             None
Non Recurring                  None
Other Items                      None
Income Tax Expense               6750000.0
Total Revenue                    85264000.0
Total Operating Expenses         53022000.0
Cost Of Revenue                  27492000.0
Total Other Income Expense Net  810000.0
Discontinued Operations          None
Net Income From Continuing Ops  26302000.0
Net Income Applicable To Common Shares  26302000.0 ]
```

```
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0      iShares Core S&P Smallcap ETF 3045012 2022-01-30
1      Vanguard Total Stock Market Index Fund 1218909 2021-12-30
2      Harbor Small Cap Value Fund 1201935 2022-01-30
3      Vanguard Small-Cap Index Fund 1113802 2021-12-30
4      iShares Russell 2000 ETF 974817 2022-01-30
5      Royce Premier Fund 819804 2021-12-30
6      Vanguard Small Cap Value Index Fund 692500 2021-12-30
7      Vanguard Extended Market Index Fund 594785 2021-12-30
8      Pennsylvania Mutual Fund Inc 505743 2021-12-30
9      Capitol Ser Tr-Fuller & Thaler Behavioral Smal... 430303 2022-03-30
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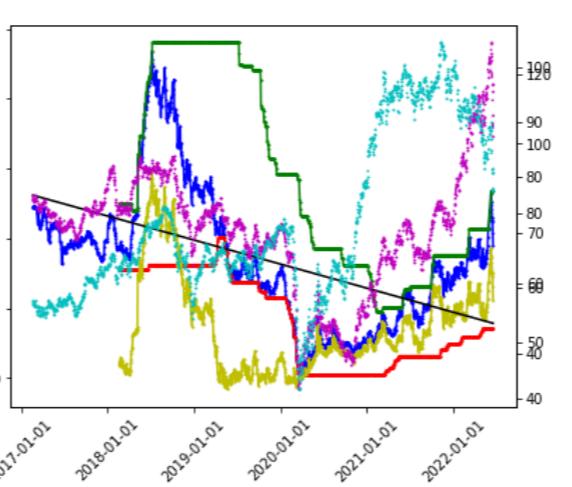
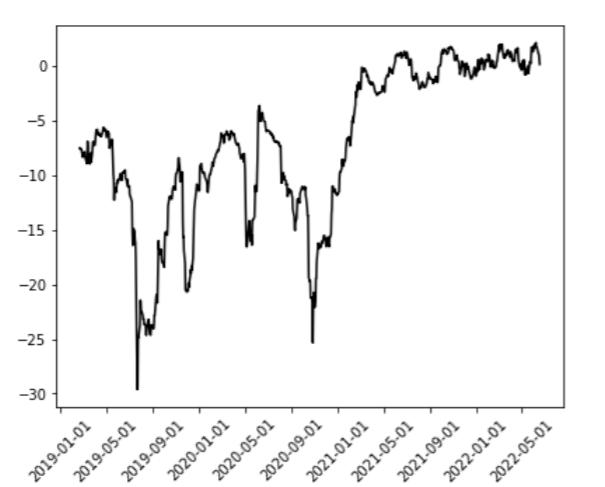
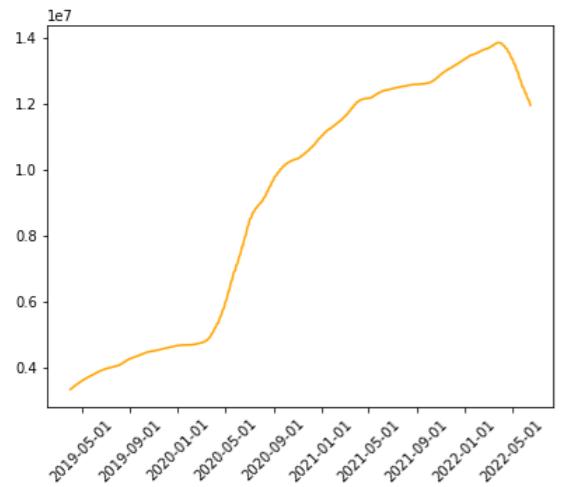
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% Out      Value
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2  0.0276  25060344
3  0.0256  22721560
4  0.0224  20324934
5  0.0188  16724001
6  0.0159  14127000
7  0.0136  12133614
8  0.0116  10317157
9  0.0099  11170665 ]
['options', ('2022-07-15',)]
symbol: ROCC
sector: Energy
Index: SP600
vol_30d_2yr: 11962556.0546875
Sector 1YMF: 2.549999237060547
1YMF: 2.549999237060547
risk trend factor: 0.10821588524114191
beta currentRatio debtToEquity      ebitda ebitdaMargins forwardPE \
ROCC  2.866152      0.497     80.978  323780000     0.45632  3.112757
```

	freeCashflow	grossMargins	grossProfits	heldPercentInstitutions	\			
ROCC	111158752	0.9232	508729000	0.83058				
	industry	marketCap	operatingCashflow	operatingMargins	payoutRatio \			
ROCC	Oil & Gas E&P	800399808	390172992	0.23271	0			
	pegRatio	priceToBook	priceToSalesTrailing12Months	profitMargins	\			
ROCC	0.13	2.546801	1.128053	0.06175				
	quickRatio	returnOnAssets	returnOnEquity	revenueGrowth	revenuePerShare \			
ROCC	0.404	0.08139	0.19205	1.903	39.08			
	sector	sharesOutstanding	shortRatio	totalCash	totalCashPerShare \			
ROCC	Energy	21163400	2.3	6358000	0.3			
	totalDebt	totalRevenue	trailingPE					
ROCC	525808992	709540992	16.0731					
	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	37.82	32.048974	43.306825	54.564677	37.893968	5.380754	27.132461	48.655476

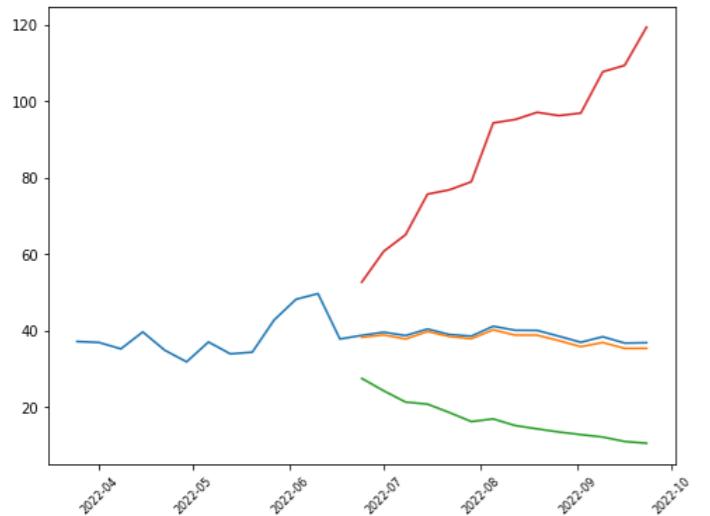
	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
ROCC	1.213679	37.82	11962556.054688	0.666102	0.594188	0.577777

l axis		r axis	
	legend		legend
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply trend 1yr		

```
Sector 1YMF: -3.82000732421875  
Sector Volume Factor: 0.8966412344901694  
Sector Risk Trend Factor: -0.12330558135216596  
Index 1YMF: -77.27001953125  
Index Volume Factor: 1.232760496116622  
Index Risk Trend Factor: -5.242200185196592
```



```
ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['mul', 'add', False]
best inner cv score, sdev (11 folds): 73.68165710134777 104.52540968608746
test cv mean error, stdev (10 folds): 78.01204671122699 108.682301709411
sell date: 2022-08-05
expected return: 0.08807474617027115
discounted return: 0.0018775347340991289
quarter return: 1.188356478413086
```



```
['options', ('2022-07-15', '2022-12-16')]
symbol: COP
sector: Energy
Index: SP500
vol_30d_2yr: 189274208.203125
Sector 1YMF: 3.6199951171875
1YMF: 3.6199951171875
risk trend factor: 0.1025203790799483
    beta currentRatio debtToEquity dividendRate dividendYield \
COP 1.420588      1.335     45.371      1.92      0.0187

    ebitda ebitdaMargins forwardPE freeCashflow grossMargins \
COP 20018999296      0.42904   12.728205  10509124608      0.49156

    grossProfits heldPercentInstitutions industry marketCap \
COP 22936000000      0.80521   Oil & Gas E&P 130945359872

    operatingCashflow operatingMargins payoutRatio pegRatio priceToBook \
COP 16995999744      0.27435     0.2348     0.54     2.968278

    priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
COP 2.806373      0.17315     1.094      0.10439

    returnOnEquity revenueGrowth revenuePerShare sector sharesOutstanding \
COP 0.21471      1.771      35.237   Energy      1318950016

    shortRatio totalCash totalCashPerShare totalDebt totalRevenue \
COP 1.79      6591000064      5.072  20600999936  46660001792

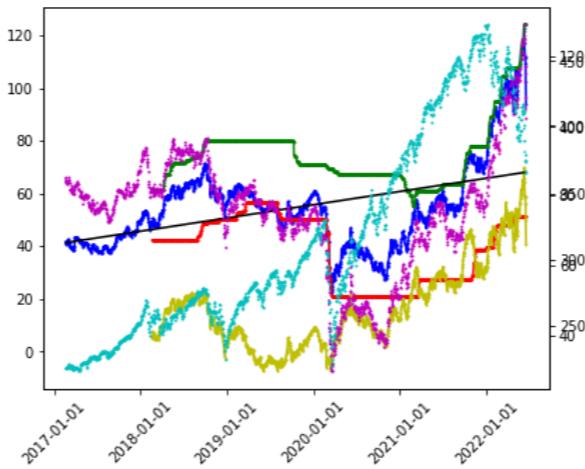
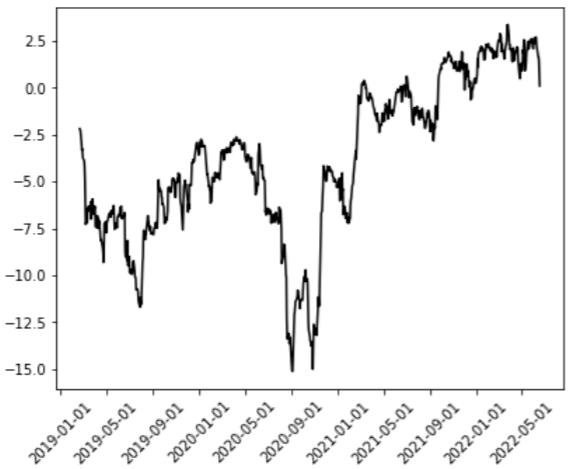
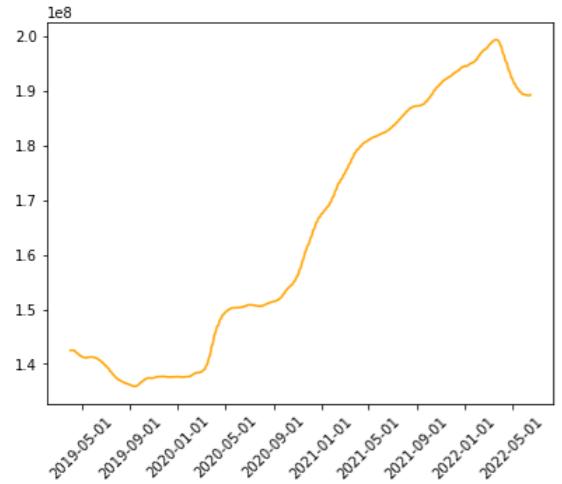
    trailingPE
COP 26.92704

Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper
2022-06-17 93.739998 99.652102 112.199365 124.746628 104.044331 7.61028 88.82377 119.264892
```

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst	
COP	0.95084	93.739998	189274208.203125	0.685759	0.80861	0.48132

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

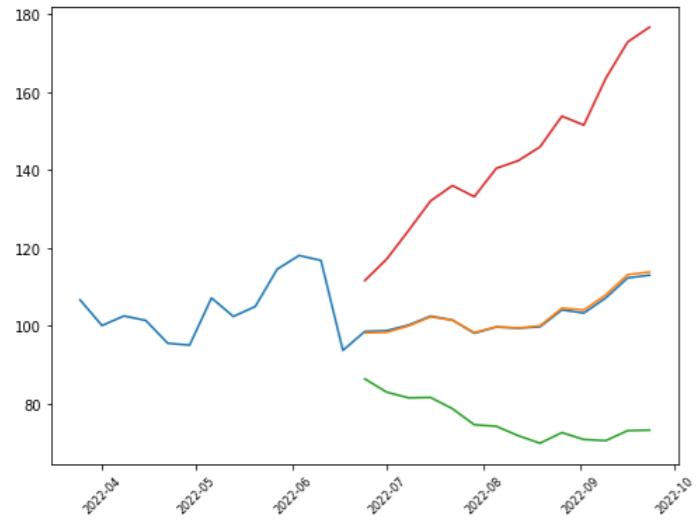
Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -287.8400573730469
Index Volume Factor: 1.1835166983613057
Index Risk Trend Factor: -3.791860877423899



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['mul', 'mul', False]
best inner cv score, sdev (11 folds): 145.49388261770284 142.16777836233962
test cv mean error, stdev (10 folds): 159.0590347405473 142.1573870850255
sell date: 2022-09-23
expected return: 0.2061373413575409
discounted return: 0.001995850484111994
quarter return: 1.201337177154807

```



```
[ 'quarterly_balance_sheet', 2021-12-31 2021-09-30 2021-06-30 \
Capital Surplus 6.058100e+10 6.043100e+10 6.033700e+10
Total Liab 4.525500e+10 4.318900e+10 4.112700e+10
Total Stockholder Equity 4.540600e+10 4.411500e+10 4.427600e+10
Other Current Liab 4.390000e+09 3.763000e+09 2.094000e+09
Total Assets 9.066100e+10 8.738400e+10 8.540300e+10
Common Stock 2.100000e+07 2.100000e+07 2.100000e+07
Other Current Assets 1.348000e+09 1.696000e+09 7.800000e+08
Retained Earnings 4.067400e+10 3.830700e+10 3.716000e+10
Other Liab 1.402100e+10 1.399200e+10 1.417200e+10
Treasury Stock -5.587000e+10 -5.464400e+10 -5.319800e+10
Other Assets 2.036000e+09 2.376000e+09 2.501000e+09
Cash 5.028000e+09 9.833000e+09 6.608000e+09
Total Current Liabilities 1.202100e+10 1.044900e+10 8.150000e+09
Short Long Term Debt 9.200000e+08 9.200000e+08 1.205000e+09
Other Stockholder Equity -4.950000e+09 -5.123000e+09 -4.920000e+09
Property Plant Equipment 6.556000e+10 5.668900e+10 5.771700e+10
Total Current Assets 1.605000e+10 2.018100e+10 1.717200e+10
Long Term Investments 7.015000e+09 8.058000e+09 8.013000e+09
Net Tangible Assets 4.540600e+10 4.411500e+10 4.427600e+10
Short Term Investments 1.563000e+09 2.094000e+09 4.053000e+09
Net Receivables 6.670000e+09 5.465000e+09 4.524000e+09
Long Term Debt 1.775300e+10 1.789500e+10 1.793000e+10
Inventory 1.208000e+09 1.043000e+09 1.138000e+09
Accounts Payable 5.025000e+09 4.131000e+09 3.613000e+09
```

2021-03-31

```
Capital Surplus 6.027800e+10
Total Liab 4.053800e+10
Total Stockholder Equity 4.315500e+10
Other Current Liab 1.180000e+09
Total Assets 8.369300e+10
Common Stock 2.100000e+07
Other Current Assets 3.260000e+08
Retained Earnings 3.560800e+10
Other Liab 1.401600e+10
Treasury Stock -5.275200e+10
Other Assets 2.523000e+09
Cash 2.831000e+09
Total Current Liabilities 7.184000e+09
Short Long Term Debt 6.890000e+08
Other Stockholder Equity -5.080000e+09
Property Plant Equipment 5.827000e+10
Total Current Assets 1.461400e+10
Long Term Investments 8.286000e+09
Net Tangible Assets 4.315500e+10
Short Term Investments 5.668000e+09
Net Receivables 4.481000e+09
Long Term Debt 1.846500e+10
Inventory 1.098000e+09
Accounts Payable 3.779000e+09 ]
```

2021-12-31 2021-09-30 \

```
[ 'quarterly_cashflow', 2021-12-31 2021-09-30 \
Investments 2.450000e+08 1.544000e+09
Change To Liabilities 7.170000e+08 3.590000e+08
Total Cashflows From Investing Activities -8.595000e+09 5.320000e+08
Net Borrowings -1.420000e+08 -3.190000e+08
Total Cash From Financing Activities -2.031000e+09 -2.086000e+09
Change To Operating Activities 1.510000e+08 -4.120000e+08
Issuance Of Stock 1.180000e+08 2.700000e+07
Net Income 2.627000e+09 2.379000e+09
Change In Cash -4.789000e+09 3.231000e+09
Repurchase Of Stock -1.399000e+09 -1.243000e+09
Effect Of Exchange Rate -3.100000e+07 -1.200000e+07
Total Cash From Operating Activities 5.868000e+09 4.797000e+09
Depreciation 1.792000e+09 1.672000e+09
Other Cashflows From Investing Activities 5.280000e+08 -3.420000e+08
Dividends Paid -6.090000e+08 -5.790000e+08
Change To Inventory -1.470000e+08 7.600000e+07
Change To Account Receivables -8.810000e+08 -8.250000e+08
Other Cashflows From Financing Activities 1.000000e+06 2.800000e+07
Change To Netincome 1.076000e+09 4.400000e+07
Capital Expenditures -1.557000e+09 -1.302000e+09
```

2021-06-30 2021-03-31

```
Investments 1.801000e+09 -4.990000e+08
Change To Liabilities -1.010000e+08 4.240000e+08
Total Cashflows From Investing Activities 7.340000e+08 -1.215000e+09
Net Borrowings -1.800000e+07 -2.600000e+07
Total Cash From Financing Activities -1.203000e+09 -1.015000e+09
Change To Operating Activities -3.450000e+08 -4.300000e+07
Issuance Of Stock 2.700000e+07 2.700000e+07
Net Income 2.091000e+09 9.820000e+08
Change In Cash 3.793000e+09 -1.520000e+08
Repurchase Of Stock -6.060000e+08 -3.750000e+08
Effect Of Exchange Rate 1.100000e+07 -2.000000e+06
Total Cash From Operating Activities 4.251000e+09 2.080000e+09
```

```

Depreciation          1.868000e+09  1.886000e+09
Other Cashflows From Investing Activities 2.100000e+07  1.190000e+08
Dividends Paid        -5.830000e+08  -5.880000e+08
Change To Inventory   -3.800000e+07  -5.100000e+07
Change To Account Receivables -9.000000e+06  -7.850000e+08
Other Cashflows From Financing Activities 4.000000e+06  -2.600000e+07
Change To Netincome   8.100000e+07  -7.730000e+08
Capital Expenditures -1.248000e+09  -1.217000e+09  ]
['quarterly_earnings',           Revenue    Earnings
Quarter
1Q2021    9948000000  982000000
2Q2021    9695000000  2091000000
3Q2021    11565000000  2379000000
4Q2021    15452000000  2627000000]

```

```

['quarterly_financials',
Research Development      None     None
Effect Of Accounting Charges None     None
Income Before Tax         4336000000.0  3582000000.0
Minority Interest          None     None
Net Income                 2627000000.0  2379000000.0
Selling General Administrative 176000000.0  144000000.0
Gross Profit               7429000000.0  5997000000.0
Ebit                      4802000000.0  3659000000.0
Operating Income            4802000000.0  3659000000.0
Other Operating Expenses   534000000.0   457000000.0
Interest Expense            -219000000.0  -219000000.0
Extraordinary Items          None     None
Non Recurring              None     None
Other Items                 None     None
Income Tax Expense          1709000000.0  1203000000.0
Total Revenue               15452000000.0  11565000000.0
Total Operating Expenses    10650000000.0  7906000000.0
Cost Of Revenue              8023000000.0   5568000000.0
Total Other Income Expense Net -466000000.0  -77000000.0
Discontinued Operations     None     None
Net Income From Continuing Ops 2627000000.0  2379000000.0
Net Income Applicable To Common Shares 2627000000.0  2379000000.0

```

```

2021-06-30  2021-03-31
Research Development      None     None
Effect Of Accounting Charges None     None
Income Before Tax         30800000000.0  17140000000.0
Minority Interest          None     None
Net Income                 2091000000.0   982000000.0
Selling General Administrative 156000000.0   274000000.0
Gross Profit               5318000000.0   4138000000.0
Ebit                      2793000000.0   1483000000.0
Operating Income            2793000000.0   1483000000.0
Other Operating Expenses   445000000.0    415000000.0
Interest Expense            -220000000.0  -226000000.0
Extraordinary Items          None     None
Non Recurring              None     None
Other Items                 None     None
Income Tax Expense          989000000.0   732000000.0
Total Revenue               9695000000.0   9948000000.0
Total Operating Expenses    6902000000.0   8465000000.0
Cost Of Revenue              4377000000.0   5810000000.0
Total Other Income Expense Net -287000000.0  231000000.0
Discontinued Operations     None     None
Net Income From Continuing Ops 2091000000.0  982000000.0
Net Income Applicable To Common Shares 2091000000.0  982000000.0

```

```

['mutualfund_holders',
0  Vanguard Total Stock Market Index Fund 37482675  2021-12-30  0.0290
1  Vanguard 500 Index Fund 27932470  2021-12-30  0.0216
2  Select Sector SPDR Fund-Energy Select 17578768  2022-01-30  0.0136
3  JP Morgan Equity Income Fund 17507721  2021-12-30  0.0135
4  American Mutual Fund Inc 14946383  2022-01-30  0.0116
5  Dodge & Cox Stock Fund 14316858  2021-12-30  0.0111
6  Washington Mutual Investors Fund 14216422  2022-01-30  0.0110
7  SPDR S&P 500 ETF Trust 14014015  2022-01-30  0.0108
8  Fidelity 500 Index Fund 13507069  2022-02-27  0.0104
9  iShares Core S&P 500 ETF 10969668  2022-01-30  0.0085

```

```

Value
0  2705499481
1  2016165684
2  1557830420
3  1263707301
4  1324548461
5  1033390810
6  1259859317
7  1241922009
8  1281280565
9  972131978  ]
['options', ('2022-08-19', '2023-01-20', '2024-01-19')]
['sustainability',           Value

```

```

2022-5
palmOil False
controversialWeapons False
gambling False
socialScore 9.71
nuclear False
furLeather False
alcoholic False
gmo False
catholic False
socialPercentile 0
peerCount 66
governanceScore 7.68
environmentPercentile 0
animalTesting False
tobacco False
totalEsg 34.92
highestControversy 2
esgPerformance LEAD_PERF
coal False
pesticides False
adult False
percentile 77.49
peerGroup Oil & Gas Producers
smallArms False
environmentScore 17.53
governancePercentile 0
militaryContract False]
symbol: OXY
sector: Energy
Index: SP500
vol_30d_2yr: 498984476.953125
Sector 1YMF: 2.1100006103515625
1YMF: 2.1100006103515625
risk trend factor: 0.0937361355002032
    beta currentRatio debtToEquity dividendRate dividendYield \
OXY 1.955081 1.156 111.198 0.52 0.0093

ebitda ebitdaMargins forwardPE freeCashflow grossMargins \
OXY 15392000000 0.53054 7.040145 9129875456 0.64697

grossProfits heldPercentInstitutions industry marketCap \
OXY 16297000000 0.82341 Oil & Gas E&P 54235242496

operatingCashflow operatingMargins payoutRatio pegRatio priceToBook \
OXY 12762999808 0.25255 0.0242 0.24 3.581064

priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
OXY 1.869407 0.25314 0.844 0.05964

returnOnEquity revenueGrowth revenuePerShare sector sharesOutstanding \
OXY 0.34101 0.577 30.999 Energy 937190976

shortRatio totalCash totalCashPerShare totalDebt totalRevenue \
OXY 2.02 1908999936 2.037 27696001024 29012000768

trailingPE
OXY 8.651517

Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper

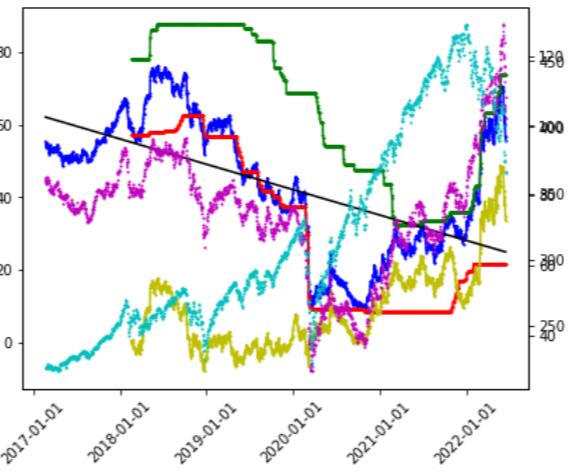
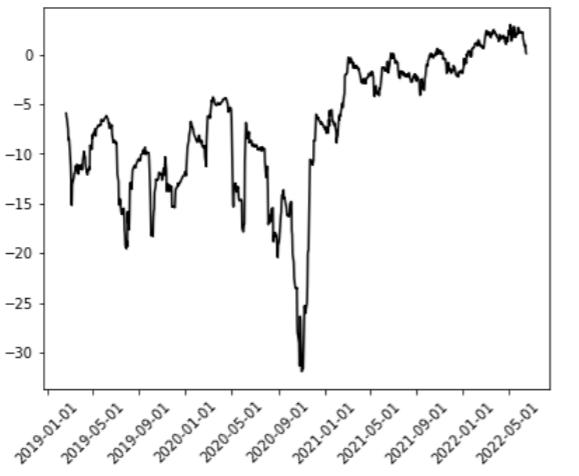
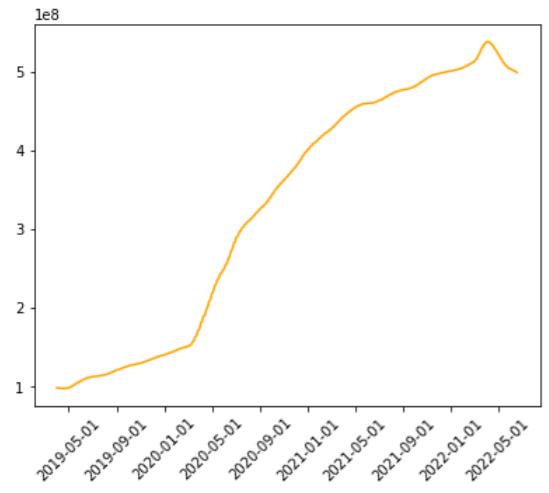
```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	55.68	56.839295	65.607143	74.374991	61.382222	4.693201	51.995819	70.768625

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
OXY	1.190976	55.68	498984476.953125	0.71978	0.690434	0.542013

	l axis	r axis
blue	symbol	magenta sector
green	trailing_1yr_max	cyan index
red	trailing_1yr_min	
orange	30d_vol_2yr	
black	risk_trend_factor/linear	
yellow	supply_trend_1yr	

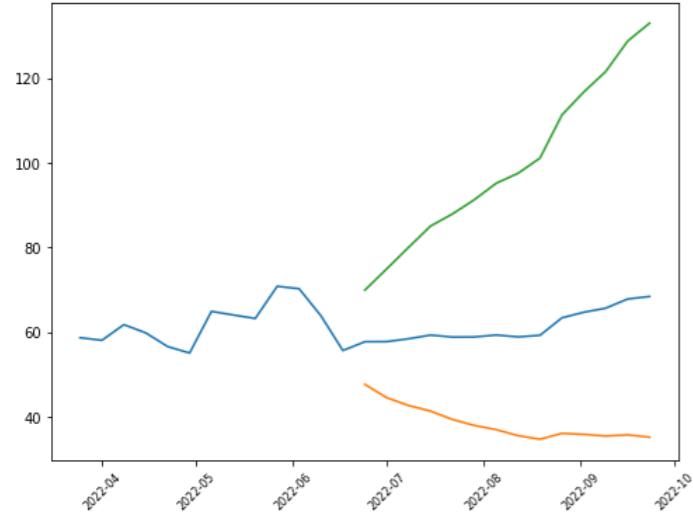
Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -287.8400573730469
Index Volume Factor: 1.1835166983613057
Index Risk Trend Factor: -3.791860877423899



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'add', False]
best inner cv score, sdev (11 folds): 67.2199335142564 59.73887069816516
test cv mean error, stdev (10 folds): 72.47517004458985 60.18150322358262
sell date: 2022-09-23
expected return: 0.2292195081205397
discounted return: 0.002197937694615515
quarter return: 1.223833775092663

```



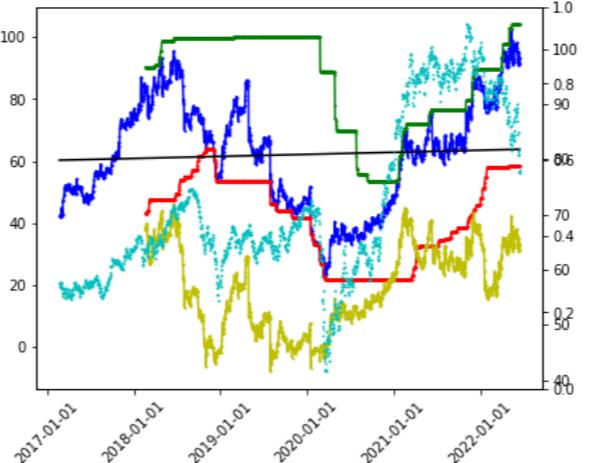
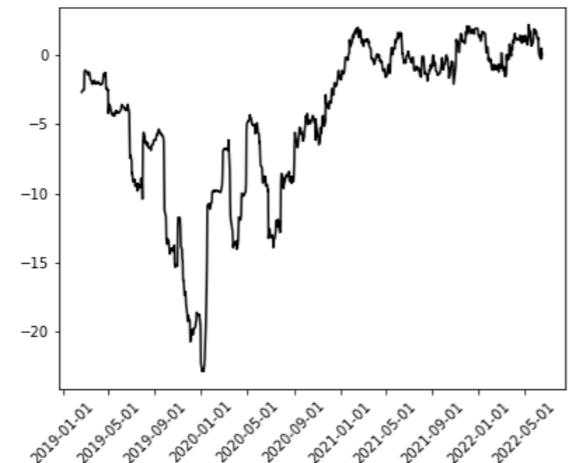
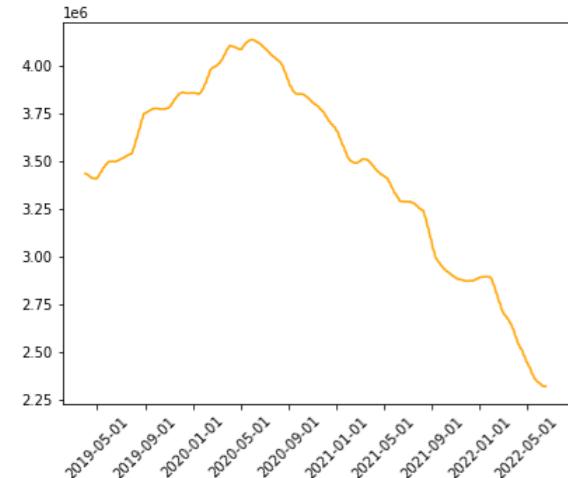
```
['options', ('2022-08-19', '2023-01-20', '2024-01-19')]
['sustainability',                                     Value
2022-5
palmoil          False
controversialWeapons  False
gambling          False
socialScore        12.04
nuclear            False
furLeather         False
alcoholic          False
gmo                False
catholic           False
socialPercentile   None
peerCount          66
governanceScore    6.88
environmentPercentile  None
animalTesting      False
tobacco             False
totalEsg           43.53
highestControversy 2
esgPerformance     LEAD_PERF
coal               False
pesticides          False
adult               False
percentile          92.95
peerGroup           Oil & Gas Producers
smallArms           False
environmentScore    24.61
governancePercentile  None
militaryContract   False]
symbol: MGPI
sector: error
sector: error
Index: SP600
vol_30d_2yr: 2319158.7890625
Sector 1YMF: 1.1299972534179688
1YMF: 1.1299972534179688
risk trend factor: 0.07424422882968507
Empty DataFrame
Columns: []
Index: [MGPI]
```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDDev	90d_lower	90d_upper
2022-06-17	93.139999	89.504506	94.30381	99.103114	92.664127	3.996399	84.671329	100.656925

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
MGPI	1.204144	93.139999	2319158.789062	0.847493	0.649088	0.471114

	l axis		r axis	
	legend		legend	
blue	symbol	magenta	sector	
green	trailing_1yr_max	cyan	index	
red	trailing_1yr_min			
orange	30d_vol_2yr			
black	risk_trend_factor/linear			
yellow	supply_trend_1yr			

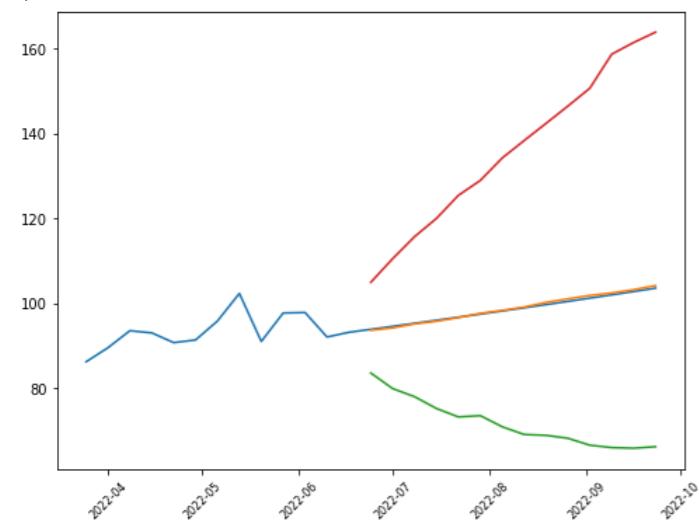
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592



```

inner cv scores:
best model: [None, 'mul', False]
best inner cv score, sdev (11 folds): 108.84843917416453 108.3305118279445
test cv mean error, stdev (10 folds): 117.69849398570712 109.76106597578858
sell date: 2022-09-23
expected return: 0.11175280862635055
discounted return: 0.0011276339901349353
quarter return: 1.109249742723615

```



```

symbol: MTDR
sector: Energy
Index: SP400
vol_30d_2yr: 48684538.4765625
Sector 1YMF: 0.3000030517578125
1YMF: 0.3000030517578125
risk trend factor: 0.01246895603489608
    beta currentRatio debtToEquity dividendRate dividendYield \
MTDR 3.830762      0.997     64.833      0.2      0.0039

    earningsGrowth      ebitda ebitdaMargins forwardPE freeCashflow \
MTDR      2.392  1377725952      0.67726  5.462322  29532376

    grossMargins grossProfits heldPercentInstitutions      industry \
MTDR      0.85318  1462239000      0.94287  Oil & Gas E&P

    marketCap operatingCashflow operatingMargins payoutRatio pegRatio \
MTDR  6336224768      1212914048      0.49636      0.0245      0.52

    priceToBook priceToSalesTrailing12Months profitMargins quickRatio \
MTDR      2.9893            3.114766      0.35956      0.801

    returnOnAssets returnOnEquity revenueGrowth revenuePerShare sector \
MTDR      0.15195      0.40598      0.966      17.345  Energy

    sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
MTDR  118125000      5.18  63001000      0.533  1515442944

    totalRevenue trailingPE
MTDR  2034253952      8.754692

```

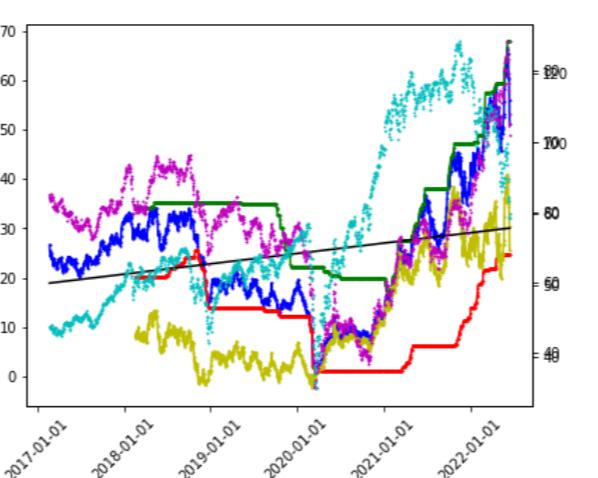
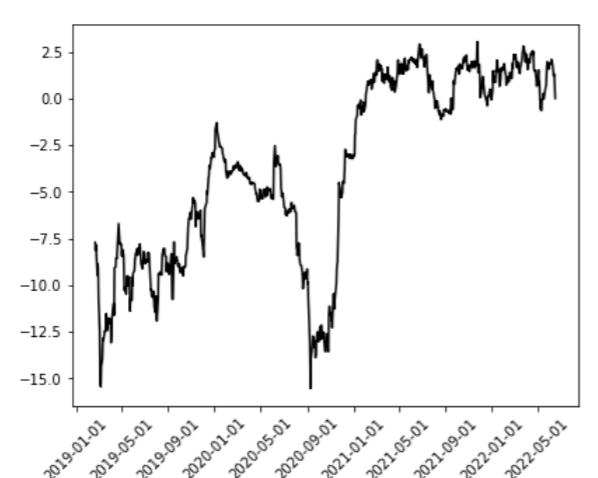
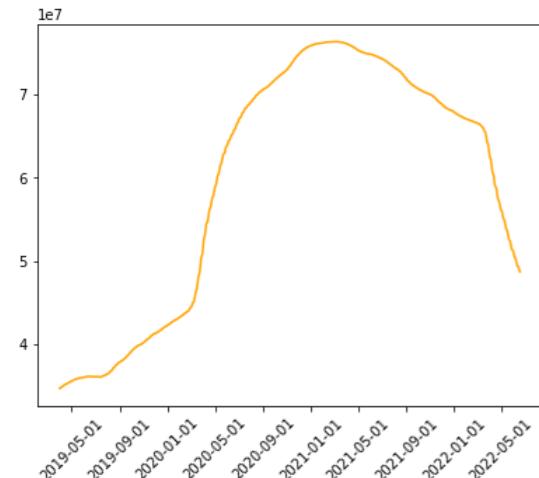
	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	51.200001	48.705794	59.342064	69.978334	55.037619	5.24577	44.546078	65.52916

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
---------------	----------	-------------	---------	-----	-------

MTDR	0.702256	51.200001	48684538.476562	0.730363	0.888435	0.461062
------	----------	-----------	-----------------	----------	----------	----------

l axis		r axis	
legend	symbol	legend	sector
blue	trailing_1yr_max	magenta	index
green	trailing_1yr_min	cyan	
red	30d_vol_2yr		
orange	risk_trend_factor/linear		
black	supply_trend_1yr		

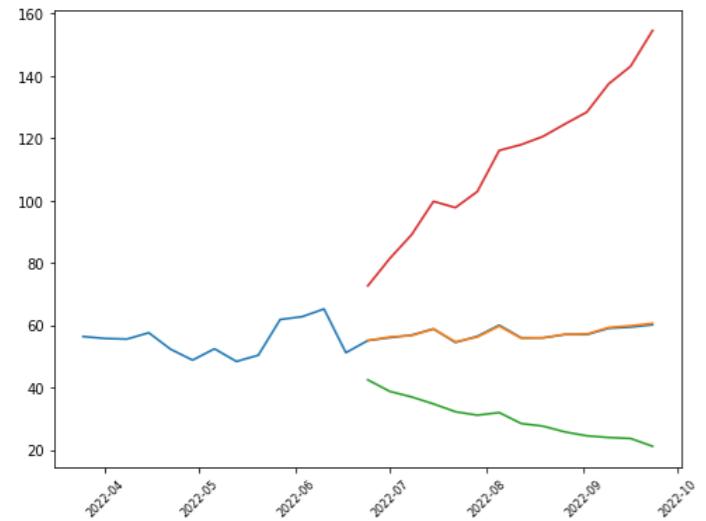
Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -69.05999755859375
Index Volume Factor: 0.5765983741853883
Index Risk Trend Factor: -5.134573474205833



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['mul', None]
best inner cv score, sdev (11 folds): 50.844243106539096 41.03142415184708
test cv mean error, stdev (10 folds): 55.75034244572739 39.8392759564478
sell date: 2022-09-23
expected return: 0.1749901708646554
discounted return: 0.0017170019621004506
quarter return: 1.1709656182178443

```



```

['options', ('2022-07-15', '2023-01-20')]
symbol: CIVI
sector: Energy
Index: SP600
vol_30d_2yr: 11280458.3984375
Sector 1YMF: -4.769992828369141
1YMF: -4.769992828369141
risk trend factor: -0.16120284517848887
    beta currentRatio debtToEquity dividendRate dividendYield      ebitda \
CIVI  1.69646      0.505     11.399      1.85      0.0308  910931008

```

```

    ebitdaMargins forwardPE freeCashflow grossMargins grossProfits \
CIVI      0.54408   4.294441   855249152     0.79951   731177000

```

```

    heldPercentInstitutions      industry marketCap operatingCashflow \
CIVI      1.04414 Oil & Gas E&P  5316416512      764176000

```

```

    operatingMargins payoutRatio pegRatio priceToBook \
CIVI      0.26443     0.2792     0.33     1.146034

```

```

    priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
CIVI      3.175374     0.16167     0.477     0.06714

```

```

    returnOnEquity revenueGrowth revenuePerShare sector sharesOutstanding \
CIVI      0.09524      10.028      31.498 Energy      84967504

```

```

    shortRatio totalCash totalCashPerShare totalDebt totalRevenue \
CIVI      6.11  154348992      1.817  528631008  1674264960

```

```

    trailingPE
CIVI  12.464144

```

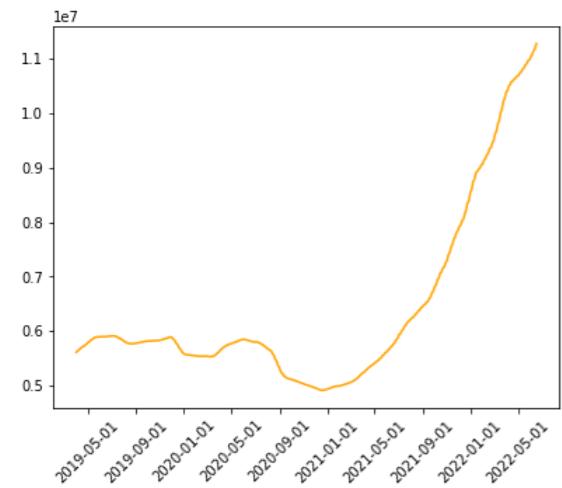
	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSD	90d_lower	90d_upper
2022-06-17	60.08002	60.574303	74.092381	87.610459	65.567778	7.658155	50.251469	80.884087

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
CIVI	1.757641	60.080002	11280458.398438	0.651117	0.000393	0.470352

ADFuller H0 rejected @ .05, Mean Reverting TS
Month Mean Reverting buy signal

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592



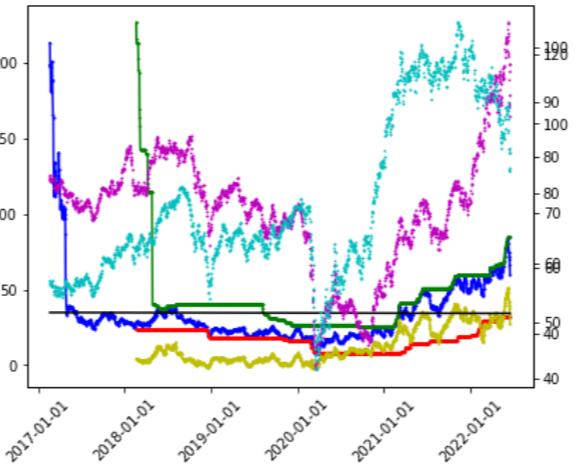
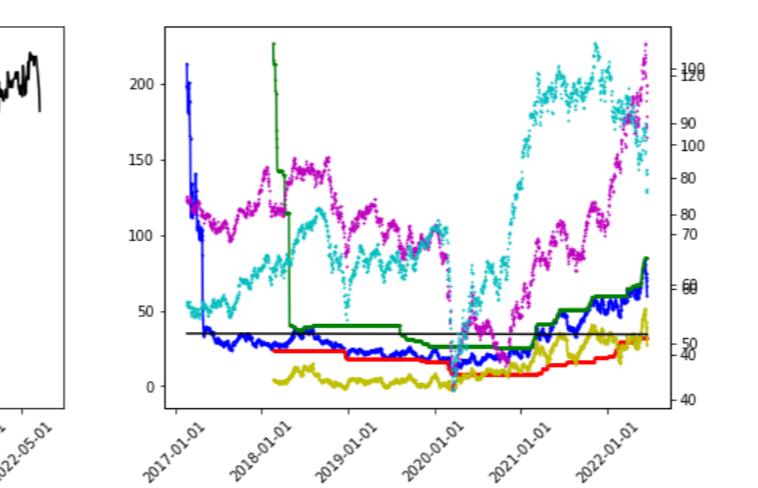
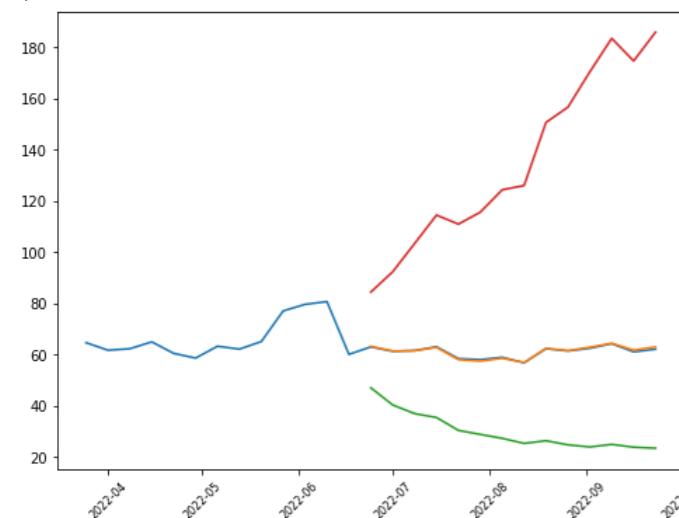
ets next 13 weeks

2022-06-17

2022-06-28

inner cv scores:

```
best model: ['mul', 'add', True]
best inner cv score, sdev (11 folds): 57.0752795091749 43.09794821567233
test cv mean error, stdev (10 folds): 61.65999123044746 42.56713626878016
sell date: 2022-09-09
expected return: 0.06949281581118608
discounted return: 0.0008401593886389058
quarter return: 1.080325313530109
```



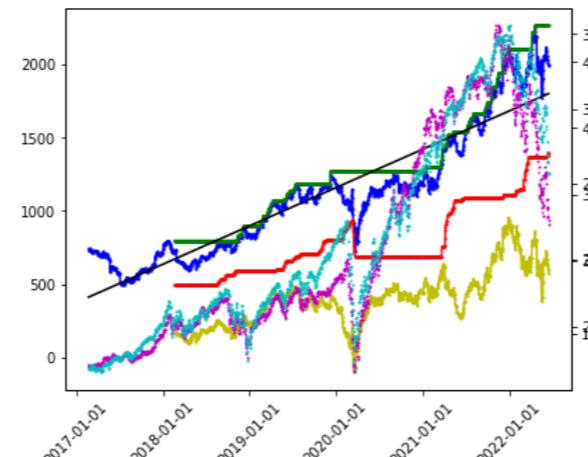
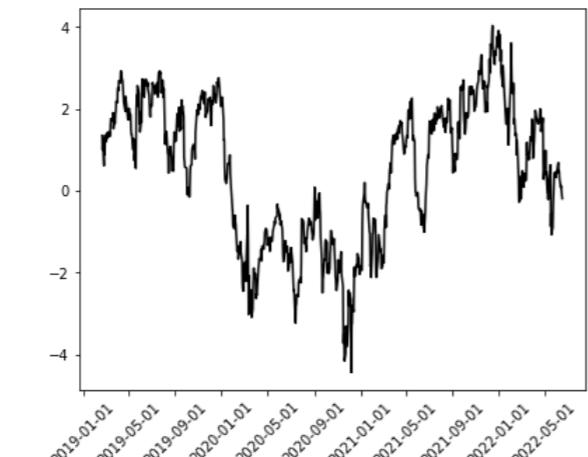
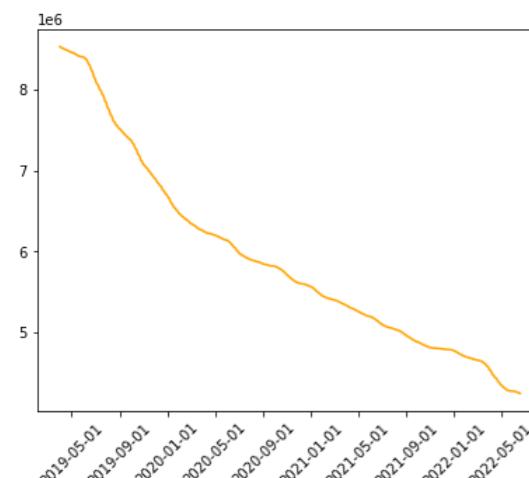
```
[ 'options', ('2022-07-15', '2022-12-16') ]
symbol: AZO
sector: Consumer Cyclical
Index: SP500
vol_30d_2yr: 4250866.015625
Sector 1YMF: -99.27978515625
1YMF: -99.27978515625
risk trend factor: -0.18868743102283064
    beta currentRatio earningsGrowth      ebitda ebitdaMargins \
AZO  0.920588     0.768       0.494  3649718016     0.23391
forwardPE freeCashflow grossMargins grossProfits heldPercentInstitutions \
AZO 17.398287  2616325632     0.5251  7717785000     0.95098

    industry   marketCap operatingCashflow operatingMargins \
AZO Specialty Retail 41931575296      3618441984     0.2068
payoutRatio pegRatio priceToSalesTrailing12Months profitMargins \
AZO      0     1.23           2.687377     0.15439
quickRatio returnOnAssets revenueGrowth revenuePerShare \
AZO  0.089      0.14284      0.158        737.93
sector sharesOutstanding shortRatio totalCash \
AZO Consumer Cyclical 20634400      2.33  280276992
totalCashPerShare totalDebt totalRevenue trailingPE
AZO 14.121  8751360000  15603160064 19.812223
Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper
2022-06-17 1992.550049 1816.773252 2002.902222 2189.031191 2042.225716 100.990553 1840.24461 2244.206822
```

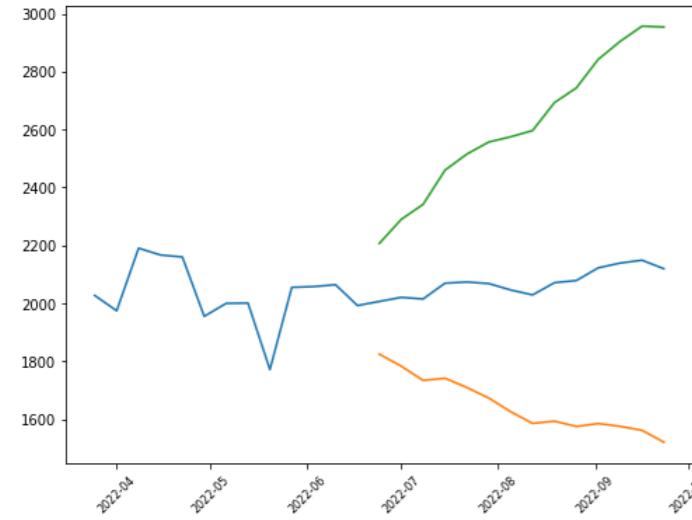
	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
AZO	1.078463	1992.550049	4250866.015625	0.768227	0.970995	0.404903

	l axis	r axis	
legend	legend	legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Sector 1YMF: -359.96002197265625
Sector Volume Factor: 1.2928194874233667
Sector Risk Trend Factor: -4.72140697901556
Index 1YMF: -287.8400573730469
Index Volume Factor: 1.1835166983613057
Index Risk Trend Factor: -3.791860877423899



```
ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'add', True]
best inner cv score, sdev (11 folds): 63137.29941524688 88854.70061714803
test cv mean error, stdev (10 folds): 68455.06438637295 91507.47459855951
sell date: 2022-09-16
expected return: 0.07854761293953862
discounted return: 0.0008695195745704876
quarter return: 1.0832448658542837
```



	2022-02-12	2021-11-20	2021-08-28	\
['quarterly_balance_sheet',				
Capital Surplus	1.266015e+09	1.499557e+09	1.465669e+09	
Total Liab	1.721595e+10	1.658570e+10	1.631374e+10	
Total Stockholder Equity	-3.137477e+09	-2.124750e+09	-1.797536e+09	
Other Current Liab	7.522000e+07	1.867520e+08	2.462660e+08	
Total Assets	1.407847e+10	1.446095e+10	1.451620e+10	
Common Stock	2.060000e+05	2.310000e+05	2.300000e+05	
Other Current Assets	1.866860e+08	1.849670e+08	1.797560e+08	
Retained Earnings	-2.730731e+09	1.354060e+08	-4.198290e+08	
Other Liab	1.048866e+09	1.101864e+09	8.551970e+08	
Good Will	3.026450e+08	3.026450e+08	3.026450e+08	
Treasury Stock	-1.672967e+09	-3.759944e+09	-2.843606e+09	
Other Assets	1.690910e+08	1.724980e+08	1.547370e+08	
Cash	2.394230e+08	9.611250e+08	1.171335e+09	
Total Current Liabilities	7.684645e+09	8.087893e+09	7.369754e+09	
Deferred Long Term Asset Charges	4.073000e+07	4.016400e+07	4.104300e+07	
Other Stockholder Equity	-3.101630e+08	-3.243270e+08	-3.079860e+08	
Property Plant Equipment	7.622850e+09	7.575494e+09	7.575603e+09	
Total Current Assets	5.903770e+09	6.349146e+09	6.415303e+09	
Long Term Investments	8.011700e+07	6.116600e+07	6.791100e+07	
Net Tangible Assets	-3.440122e+09	-2.427395e+09	-2.100181e+09	
Short Term Investments	4.085400e+07	5.552000e+07	4.600700e+07	
Net Receivables	4.055850e+08	3.792760e+08	3.783920e+08	
Long Term Debt	5.840884e+09	4.771266e+09	5.269820e+09	
Inventory	5.031222e+09	4.768258e+09	4.639813e+09	
Accounts Payable	6.378606e+09	6.171344e+09	6.013924e+09	
Short Long Term Debt	NaN	5.000000e+08	NaN	

	2021-05-08
--	------------

Capital Surplus	1.381982e+09
Total Liab	1.590134e+10
Total Stockholder Equity	-1.763392e+09
Other Current Liab	9.426800e+07
Total Assets	1.413795e+10
Common Stock	2.290000e+05
Other Current Assets	1.730250e+08
Retained Earnings	-1.205600e+09
Other Liab	1.025687e+09
Good Will	3.026450e+08
Treasury Stock	-1.940003e+09
Other Assets	1.570380e+08
Cash	9.756460e+08
Total Current Liabilities	7.013249e+09
Deferred Long Term Asset Charges	3.036600e+07
Other Stockholder Equity	-3.043820e+08
Property Plant Equipment	7.377995e+09
Total Current Assets	6.224396e+09
Long Term Investments	7.587200e+07
Net Tangible Assets	-2.066037e+09
Short Term Investments	5.057900e+07
Net Receivables	3.596690e+08
Long Term Debt	5.267896e+09
Inventory	4.665477e+09
Accounts Payable	5.778222e+09
Short Long Term Debt	NaN

]

	2022-02-12	2021-11-20	\
--	------------	------------	---

['quarterly_cashflow',			
Investments	-2.606300e+07	-3317000.0	
Change To Liabilities	1.895650e+08	89268000.0	
Total Cashflows From Investing Activities	-1.203520e+08	-90961000.0	
Net Borrowings	5.506870e+08	-13687000.0	
Total Cash From Financing Activities	-9.639540e+08	-895946000.0	
Change To Operating Activities	-6.434300e+07	29960000.0	
Issuance Of Stock	4.535700e+07	21100000.0	
Net Income	4.717550e+08	555235000.0	
Change In Cash	-7.217020e+08	-210210000.0	
Repurchase Of Stock	-1.559998e+09	-899997000.0	
Effect Of Exchange Rate	7.880000e+05	-1233000.0	
Total Cash From Operating Activities	3.618160e+08	777930000.0	
Depreciation	9.969200e+07	99590000.0	
Change To Inventory	-2.564710e+08	-13698000.0	
Change To Account Receivables	-2.580900e+07	-1576000.0	
Change To Netincome	3.933000e+07	32391000.0	
Capital Expenditures	-1.058740e+08	-102269000.0	
Other Cashflows From Financing Activities	NaN	-3362000.0	

	2021-08-28	2021-05-08
--	------------	------------

Investments	-2.580200e+07	3.616000e+06
Change To Liabilities	3.948540e+08	4.185180e+08
Total Cashflows From Investing Activities	-2.431150e+08	-1.302590e+08
Net Borrowings	-1.500900e+07	-2.657680e+08
Total Cash From Financing Activities	-8.491750e+08	-1.110353e+09
Change To Operating Activities	-1.403000e+07	-1.428200e+07
Issuance Of Stock	6.583300e+07	5.541400e+07
Net Income	7.857710e+08	5.961640e+08
Change In Cash	1.956890e+08	-5.051800e+07
Repurchase Of Stock	-8.999990e+08	-8.999990e+08

```

Effect Of Exchange Rate      -2.170000e+05 -4.060000e+05
Total Cash From Operating Activities 1.288196e+09 1.190500e+09
Depreciation                1.296390e+08 9.401700e+07
Change To Inventory          2.375400e+07 6.727100e+07
Change To Account Receivables -1.937400e+07 -7.656000e+06
Change To Netincome          -2.242800e+07 2.170200e+07
Capital Expenditures        -2.461140e+08 -1.350580e+08
Other Cashflows From Financing Activities -3.362000e+06 -3.362000e+06 ]
[ 'quarterly_earnings',           Revenue   Earnings
Quarter

```

```

202021 3651023000 596164000
3Q2021 4913484000 785771000
4Q2021 3668904000 555235000
1Q2022 3369750000 471755000]

```

```
[ 'quarterly_financials',           2022-02-12 2021-11-20 \

```

```

Research Development           None     None
Effect Of Accounting Charges  None     None
Income Before Tax             584289000.0 711201000.0
Minority Interest              None     None
Net Income                    471755000.0 555235000.0
Selling General Administrative 1158466000.0 1170675000.0
Gross Profit                  1785226000.0 1925160000.0
Ebit                          626760000.0 754485000.0
Operating Income               626760000.0 754485000.0
Other Operating Expenses       None     None
Interest Expense              -42471000.0 -43284000.0
Extraordinary Items            None     None
Non Recurring                 None     None
Other Items                   None     None
Income Tax Expense             112534000.0 155966000.0
Total Revenue                 3369750000.0 3668904000.0
Total Operating Expenses       2742990000.0 2914419000.0
Cost Of Revenue               1584524000.0 1743744000.0
Total Other Income Expense Net -42471000.0 -43284000.0
Discontinued Operations       None     None
Net Income From Continuing Ops 471755000.0 555235000.0
Net Income Applicable To Common Shares 471755000.0 555235000.0

```

```
2021-08-28 2021-05-08

```

```

Research Development           None     None
Effect Of Accounting Charges  None     None
Income Before Tax             985910000.0 758479000.0
Minority Interest              None     None
Net Income                    785771000.0 596164000.0
Selling General Administrative 1526809000.0 1111441000.0
Gross Profit                  2567839000.0 1914946000.0
Ebit                          1041030000.0 803505000.0
Operating Income               1041030000.0 803505000.0
Other Operating Expenses       None     None
Interest Expense              -63537000.0 -45026000.0
Extraordinary Items            None     None
Non Recurring                 None     None
Other Items                   None     None
Income Tax Expense             200139000.0 162315000.0
Total Revenue                 4913484000.0 3651023000.0
Total Operating Expenses       3872454000.0 2847518000.0
Cost Of Revenue               2345645000.0 1736077000.0
Total Other Income Expense Net -55120000.0 -45026000.0
Discontinued Operations       None     None
Net Income From Continuing Ops 785771000.0 596164000.0
Net Income Applicable To Common Shares 785771000.0 596164000.0 ]

```

```
[ 'mutualfund_holders',           Holder  Shares Date Reported \

```

```

0      Vanguard Total Stock Market Index Fund 595909 2021-12-30
1      Fidelity Low-Priced Stock Fund 556308 2022-02-27
2      Vanguard 500 Index Fund 444098 2021-12-30
3      JP Morgan Large Cap Growth Fund 340914 2021-12-30
4      Vanguard Mid-Cap Index Fund 237061 2021-12-30
5      SPDR S&P 500 ETF Trust 222942 2022-01-30
6      Fidelity 500 Index Fund 214729 2022-02-27
7 John Hancock Fds III-Disciplined Value Mid Cap Fd 191852 2021-12-30
8      iShares Core S&P 500 ETF 174421 2022-01-30
9      Vanguard Growth Index Fund 166427 2021-12-30

```

```

% Out      Value
0 0.0300 1249257668
1 0.0280 1036618764
2 0.0224 931002606
3 0.0172 714688700
4 0.0119 496972309
5 0.0112 442840841
6 0.0108 400123871
7 0.0097 402196614
8 0.0088 346461153
9 0.0084 348895898 ]
[ 'options', ('2022-09-16', '2022-12-16')]           Value
[ 'sustainability',           Value

```

```

2022-5
palmOil False
controversialWeapons False
gambling False
socialScore 7.17
nuclear False
furLeather False
alcoholic False
gmo False
catholic False
socialPercentile 0
peerCount 57
governanceScore 4.12
environmentPercentile 0
animalTesting False
tobacco False
totalEsg 11.34
highestControversy 2
esgPerformance LAG_PERF
coal False
pesticides False
adult False
percentile 3.53
peerGroup Retailing
smallArms False
environmentScore 0.05
governancePercentile 0
militaryContract False]
symbol: MUSA
sector: Consumer Cyclical
Index: SP400
vol_30d_2yr: 5753261.328125
Sector 1YMF: -10.839996337890625
1YMF: -10.839996337890625
risk trend factor: -0.23987606577725132
    beta currentRatio debtToEquity dividendRate dividendYield \
MUSA 1.005392 1.137 277.763 1.24 0.0051

earningsGrowth ebitda ebitdaMargins forwardPE freeCashflow \
MUSA 0.958 828000000 0.05405 20.8 406662496

grossMargins grossProfits heldPercentInstitutions industry \
MUSA 0.0695 1064700000 0.85711 Specialty Retail

marketCap operatingCashflow operatingMargins payoutRatio pegRatio \
MUSA 5758241792 737400000 0.04001 0.0569 3.41

priceToBook priceToSalesTrailing12Months profitMargins quickRatio \
MUSA 6.981385 0.375894 0.02591 0.669

returnOnAssets returnOnEquity revenueGrowth revenuePerShare \
MUSA 0.11377 0.49884 0.766 584.464

sector sharesOutstanding shortRatio totalCash \
MUSA Consumer Cyclical 25633200 4.85 256400000

totalCashPerShare totalDebt totalRevenue trailingPE
MUSA 10.325 2242099968 15318800384 17.544518

Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper

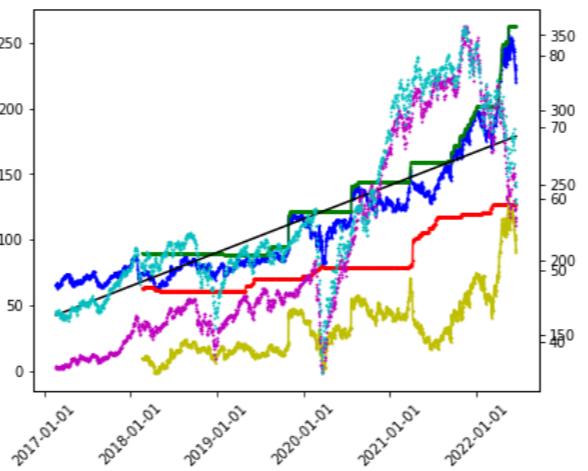
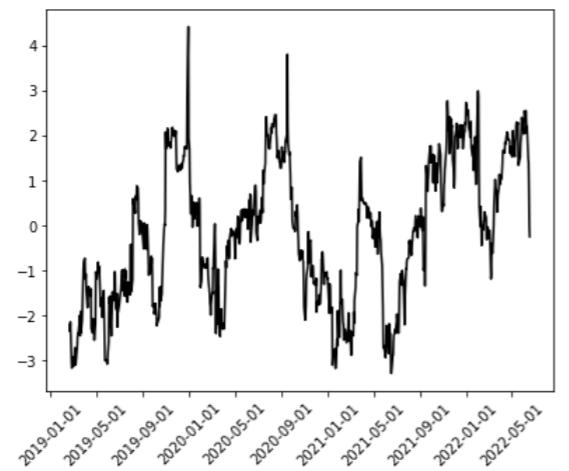
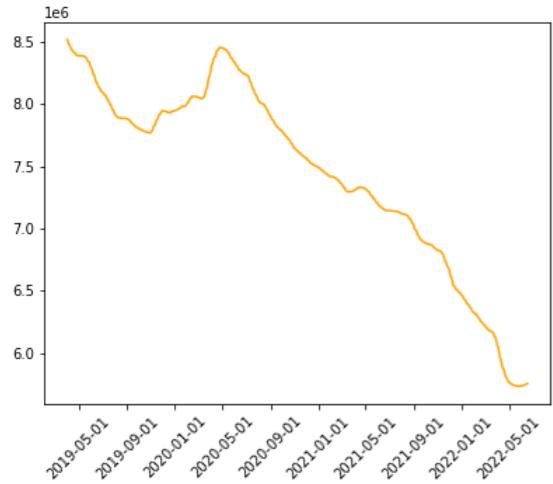
```

2022-06-17 219.949997 223.738215 240.378096 257.017977 230.259682 18.979918 192.299846 268.219518

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
MUSA	1.334565	219.949997	5753261.328125	0.722226	0.983263	0.407464

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

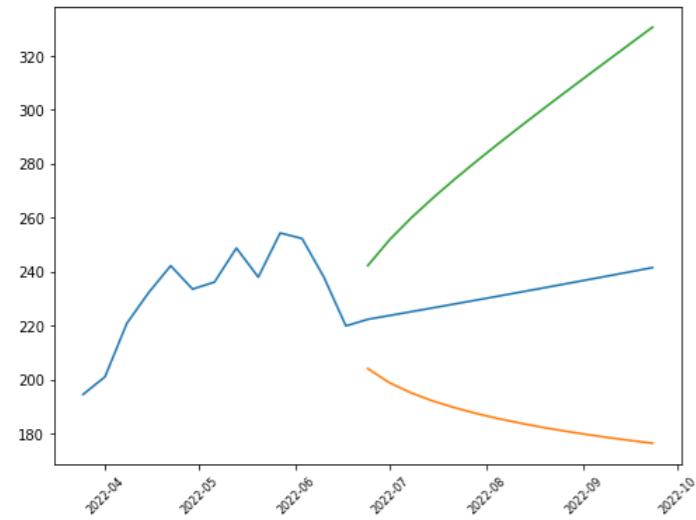
Sector 1YMF: -359.96002197265625
Sector Volume Factor: 1.2928194874233667
Sector Risk Trend Factor: -4.72140697901556
Index 1YMF: -69.05999755859375
Index Volume Factor: 0.5765983741853883
Index Risk Trend Factor: -5.134573474205833



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, 'add', False]
best inner cv score, sdev (11 folds): 715.3258063056979 661.0824664053292
test cv mean error, stdev (10 folds): 648.0064669201531 656.4161850798687
sell date: 2022-09-23
expected return: 0.09831618072052735
discounted return: 0.0009981388968265392
quarter return: 1.0961269148506856

```



```
[{'quarterly_balance_sheet', 2021-12-31 2021-09-30 2021-06-30 \
Intangible Assets 1.407000e+08 1.411000e+08 1.412000e+08
Capital Surplus 5.348000e+08 5.305000e+08 5.284000e+08
Total Liab 3.241000e+09 3.269500e+09 3.228200e+09
Total Stockholder Equity 8.072000e+08 8.248000e+08 7.579000e+08
Other Current Liab 3.200000e+07 8.600000e+06 1.200000e+07
Total Assets 4.048200e+09 4.094300e+09 3.986100e+09
Common Stock 5.000000e+05 5.000000e+05 5.000000e+05
Other Current Assets 6.000000e+05 9.000000e+05 8.000000e+05
Retained Earnings 2.112400e+09 2.011000e+09 1.913600e+09
Other Liab 3.567000e+08 3.494000e+08 3.535000e+08
Good Will 3.280000e+08 3.291000e+08 3.291000e+08
Treasury Stock -1.840500e+07 -1.717200e+09 -1.684600e+09
Other Assets 1.410000e+07 1.340000e+07 1.290000e+07
Cash 2.564000e+08 3.013000e+08 1.650000e+08
Total Current Liabilities 6.753000e+08 7.189000e+08 6.964000e+08
Short Long Term Debt 4.000000e+06 4.000000e+06 4.000000e+06
Other Stockholder Equity -1.200000e+06 -1.300000e+06 -1.500000e+06
Property Plant Equipment 2.797600e+09 2.784100e+09 2.738200e+09
Total Current Assets 7.678000e+08 8.266000e+08 7.647000e+08
Net Tangible Assets 3.385000e+08 3.546000e+08 2.876000e+08
Net Receivables 1.957000e+08 2.084000e+08 2.602000e+08
Long Term Debt 1.669500e+09 1.669600e+09 1.669600e+09
Inventory 2.923000e+08 2.893000e+08 3.117000e+08
Accounts Payable 3.925000e+08 6.783000e+08 6.533000e+08

2021-03-31
Intangible Assets 1.413000e+08
Capital Surplus 5.256000e+08
Total Liab 3.200000e+09
Total Stockholder Equity 7.806000e+08
Other Current Liab 2.340000e+07
Total Assets 3.980500e+09
Common Stock 5.000000e+05
Other Current Assets 9.000000e+05
Retained Earnings 1.791500e+09
Other Liab 3.459000e+08
Good Will 3.364000e+08
Treasury Stock -1.537000e+09
Other Assets 1.250000e+07
Cash 3.041000e+08
Total Current Liabilities 6.750000e+08
Short Long Term Debt 3.000000e+06
Other Stockholder Equity -1.700000e+06
Property Plant Equipment 2.697000e+09
Total Current Assets 7.934000e+08
Net Tangible Assets 3.029000e+08
Net Receivables 1.821000e+08
Long Term Debt 1.669000e+09
Inventory 2.830000e+08
Accounts Payable 6.214000e+08 ]
['quarterly_cashflow', 2021-12-31 2021-09-30 \
Change To Liabilities -34100000.0 22900000.0
Total Cashflows From Investing Activities -60500000.0 -75400000.0
Net Borrowings -3800000.0 -3600000.0
Total Cash From Financing Activities -134800000.0 -44500000.0
Change To Operating Activities 4500000.0 4500000.0
Net Income 108800000.0 104000000.0
Change In Cash -44900000.0 136300000.0
Repurchase Of Stock -123500000.0 -33200000.0
Total Cash From Operating Activities 150400000.0 256200000.0
Depreciation 55700000.0 53800000.0
Other Cashflows From Investing Activities 200000.0 -800000.0
Dividends Paid -7400000.0 -6400000.0
Change To Inventory -3900000.0 23300000.0
Change To Account Receivables 12600000.0 51900000.0
Other Cashflows From Financing Activities -100000.0 -1300000.0
Change To Netincome 15300000.0 3500000.0
Capital Expenditures -63100000.0 -74800000.0

2021-06-30 2021-03-31
Change To Liabilities 32500000.0 81600000.0
Total Cashflows From Investing Activities -82000000.0 -69630000.0
Net Borrowings -2500000.0 67840000.0
Total Cash From Financing Activities -158100000.0 607000000.0
Change To Operating Activities -4800000.0 -3300000.0
Net Income 128800000.0 55300000.0
Change In Cash -139100000.0 140500000.0
Repurchase Of Stock -148300000.0 -50000000.0
Total Cash From Operating Activities 101000000.0 229800000.0
Depreciation 54000000.0 51600000.0
Other Cashflows From Investing Activities -300000.0 -900000.0
Dividends Paid -6700000.0 -6800000.0
Change To Inventory -28800000.0 20500000.0
Change To Account Receivables -78100000.0 -5300000.0
Other Cashflows From Financing Activities -600000.0 -14600000.0
```

```

Change To Netincome          8900000.0   14900000.0
Capital Expenditures        -83200000.0  -53600000.0  ]
['quarterly_earnings',      Revenue    Earnings
Quarter
1Q2021  3067500000  55300000
2Q2021  3931600000  128800000
3Q2021  4079500000  104000000
4Q2021  4240200000  108800000]
['quarterly_financials',
Research Development        None      None
Effect Of Accounting Charges None      None
Income Before Tax           140900000.0  137700000.0
Minority Interest            None      None
Net Income                  108800000.0  104000000.0
Selling General Administrative 65300000.0  58800000.0
Gross Profit                281500000.0  271300000.0
Ebit                         160500000.0  158700000.0
Operating Income             160500000.0  158700000.0
Other Operating Expenses     600000.0   600000.0
Interest Expense              -20200000.0  -20500000.0
Extraordinary Items          None      None
Non Recurring                None      None
Other Items                  None      None
Income Tax Expense            32100000.0   33700000.0
Total Revenue                4240200000.0  4079500000.0
Total Operating Expenses     4079700000.0  3920800000.0
Cost Of Revenue               3958700000.0  3808200000.0
Total Other Income Expense Net -19600000.0  -21000000.0
Discontinued Operations       None      None
Net Income From Continuing Ops 108800000.0  104000000.0
Net Income Applicable To Common Shares 108800000.0  104000000.0

2021-06-30  2021-03-31
Research Development        None      None
Effect Of Accounting Charges None      None
Income Before Tax           170000000.0  73300000.0
Minority Interest            None      None
Net Income                  128800000.0  55300000.0
Selling General Administrative 59400000.0  53200000.0
Gross Profit                303900000.0  208000000.0
Ebit                         190500000.0  103200000.0
Operating Income             190500000.0  103200000.0
Other Operating Expenses     700000.0   600000.0
Interest Expense              -20400000.0  -21300000.0
Extraordinary Items          None      None
Non Recurring                None      None
Other Items                  None      None
Income Tax Expense            41200000.0   18000000.0
Total Revenue                3931600000.0  3067500000.0
Total Operating Expenses     3741100000.0  2964300000.0
Cost Of Revenue               3627700000.0  2859500000.0
Total Other Income Expense Net -20500000.0  -29900000.0
Discontinued Operations       None      None
Net Income From Continuing Ops 128800000.0  55300000.0
Net Income Applicable To Common Shares 128800000.0  55300000.0 ]
['mutualfund_holders',      Holder    Shares Date Reported \
0      Vanguard Total Stock Market Index Fund 692307  2021-12-30
1      iShares Core S&P Midcap ETF 653145  2022-01-30
2      Vanguard Small-Cap Index Fund 612444  2021-12-30
3      iShares Russell 2000 ETF 550694  2022-01-30
4      JP Morgan Value Advantage Fund 460219  2021-12-30
5  Capitol Ser Tr-Fuller & Thaler Behavioral Smal... 405977  2022-03-30
6      Vanguard Small Cap Value Index Fund 388794  2021-12-30
7  Victory Portfolios-Sycamore Small Company Oppo... 350000  2022-01-30
8      Vanguard Extended Market Index Fund 307708  2021-12-30
9      SPDR S&P Mid Cap 400 ETF Trust 202377  2022-01-30

% Out      Value
0  0.0286  137935246
1  0.0270  128447495
2  0.0253  122023342
3  0.0228  108299482
4  0.0190  91694033
5  0.0168  81179160
6  0.0161  77463316
7  0.0145  68831000
8  0.0127  61307741
9  0.0084  39799460 ]
['options', ('2022-07-15', '2022-11-18')]
symbol: UFCS
sector: error
sector: error
Index: SP600
vol_30d_2yr: 1723938.8671875
Sector 1YMF: -1.0800018310546875
1YMF: -1.0800018310546875

```

6/22/22, 7:59 AM

risk trend factor: -0.24161108190588027

Empty DataFrame

Columns: []

Index: [UFCS]

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper	
2022-06-17	32.57	29.682972		31.6	33.517028	30.725873	1.016477	28.69292	32.758826

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
UFCS	1.187165	32.57	1723938.867188	0.782015	0.585692	0.498098

| axis r axis

legend legend

blue symbol

magenta sector

green trailing_1yr_max

cyan index

red trailing_1yr_min

orange 30d_vol_2yr

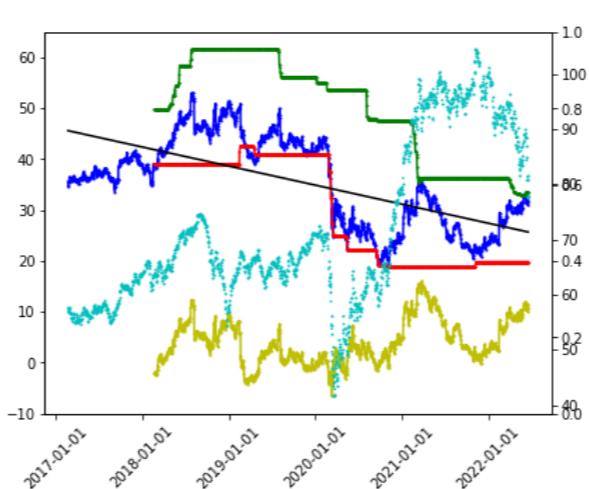
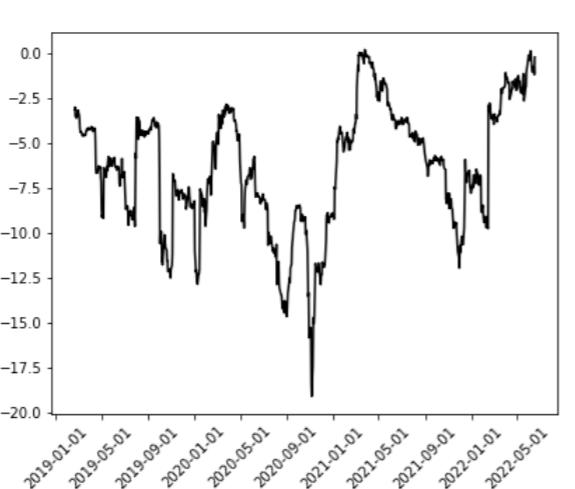
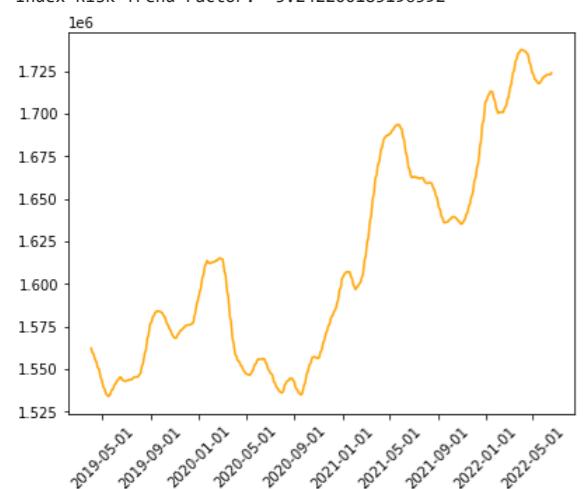
black risk_trend_factor/linear

yellow supply_trend_1yr

Index 1YMF: -77.27001953125

Index Volume Factor: 1.232760496116622

Index Risk Trend Factor: -5.242200185196592



ets next 13 weeks

2022-06-17

2022-06-28

inner cv scores:

best model: [None, 'mul', True]

best inner cv score, sdev (11 folds): 13.341413763268706 9.201685358755636

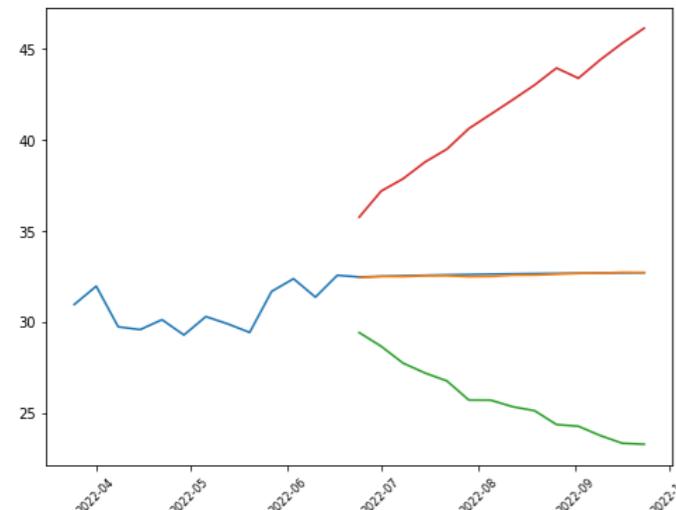
test cv mean error, stdev (10 folds): 14.539987946812818 8.79407392523654

sell date: 2022-09-23

expected return: 0.004270590798796844

discounted return: 4.533610962176304e-05

quarter return: 1.0041795375476605



AnalyzeSP1500-Backup

```

['options', ('2022-08-19',)]
symbol: CVBF
sector: Financial Services
Index: SP600
vol_30d_2yr: 12635628.7109375
Sector 1YMF: -0.7200050354003906
1YMF: -0.7200050354003906
risk trend factor: -0.30769443950852354
          beta dividendRate dividendYield earningsGrowth ebitdaMargins \
CVBF  0.377941           0.72        0.0305       -0.34           0
          forwardPE grossMargins grossProfits heldPercentInstitutions \
CVBF  17.342657            0    483535000          0.72487
          industry marketCap operatingMargins payoutRatio pegRatio \
CVBF  Banks-Regional 3360945408      0.60509     0.5143     1.53
          priceToBook priceToSalesTrailing12Months profitMargins returnOnAssets \
CVBF  1.628365             7.12847     0.41187     0.01199
          returnOnEquity revenueGrowth revenuePerShare           sector \
CVBF  0.09482        -0.091        3.428   Financial Services
          sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
CVBF  135522000         3.87  1659897984        11.72  598908992
          totalRevenue trailingPE
CVBF  471481984  15.696201
          Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper

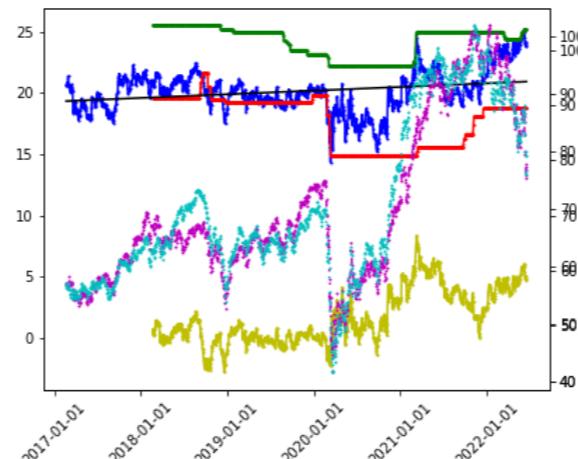
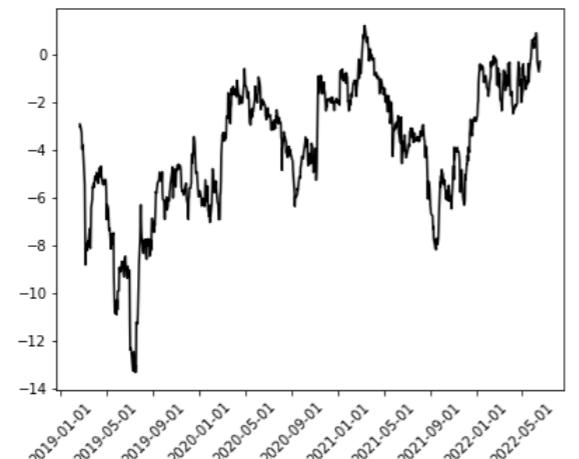
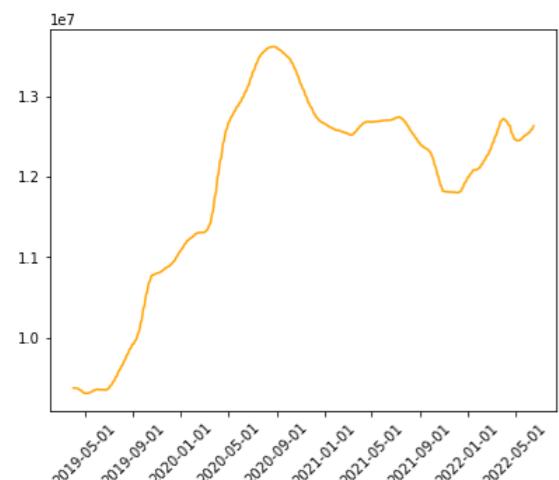
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2022-06-17 24.129999 23.52193 24.381429 25.240927 23.736508 0.654089 22.428329 25.04468

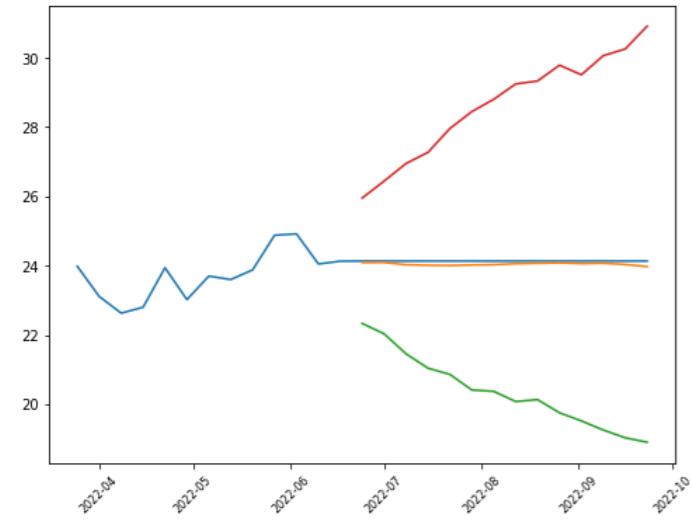
	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
CVBF	1.598852	24.129999	12635628.710938	0.887047	0.313254	0.312157

T axis		T axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Sector 1YMF: -72.269996430664
Sector Volume Factor: 1.2707168073107045
Sector Risk Trend Factor: -4.617890709055871
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592



```
ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, 'mul', True]
best inner cv score, sdev (11 folds): 3.1465213215891263 2.1783852199708105
test cv mean error, stdev (10 folds): 3.349576521481265 2.1831979398171715
sell date: 2022-09-23
expected return: 0.00014301552370514677
discounted return: 1.5213341142406023e-06
quarter return: 1.0001399724272713
```



```
[{'quarterly_balance_sheet', 2022-03-31 2021-12-31 2021-09-30 \
Intangible Assets 2.731000e+07 2.539400e+07 2.728600e+07
Total Liab 1.546409e+10 1.380219e+10 1.413768e+10
Total Stockholder Equity 2.075043e+09 2.081503e+09 2.063920e+09
Total Assets 1.753914e+10 1.588370e+10 1.620160e+10
Common Stock 2.221305e+09 1.208903e+09 1.208569e+09
Other Liab 1.194280e+08 9.571600e+07 8.888300e+07
Good Will 7.658220e+08 6.637070e+08 6.637070e+08
Treasury Stock -1.462620e+08 -3.968000e+06 3.078000e+06
Other Assets 9.004589e+09 8.111415e+09 8.115782e+09
Cash 1.653039e+09 1.732548e+09 2.561363e+09
Total Current Liabilities 1.534467e+10 1.369213e+10 1.402944e+10
Other Stockholder Equity -1.462620e+08 -3.968000e+06 3.078000e+06
Property Plant Equipment 5.343500e+07 6.837000e+07 6.921500e+07
Total Current Assets 1.659898e+09 1.822471e+09 2.671922e+09
Long Term Investments 6.028083e+09 5.192340e+09 4.653686e+09
Net Tangible Assets 1.281911e+09 1.392402e+09 1.372927e+09
Short Term Investments 6.859000e+06 2.599900e+07 2.726000e+07
Accounts Payable 1.474576e+10 1.302678e+10 1.335197e+10
Other Current Assets NaN 3.420400e+07 3.025300e+07
Retained Earnings NaN 8.755680e+08 8.522730e+08
Deferred Long Term Asset Charges NaN 2.500100e+07 NaN
Net Receivables NaN 7.602000e+06 3.687000e+07

2021-06-30
Intangible Assets 2.930000e+07
Total Liab 1.348421e+10
Total Stockholder Equity 2.055074e+09
Total Assets 1.553929e+10
Common Stock 1.214882e+09
Other Liab 8.605700e+07
Good Will 6.637070e+08
Treasury Stock 1.325100e+07
Other Assets 8.337049e+09
Cash 2.331865e+09
Total Current Liabilities 1.337953e+10
Other Stockholder Equity 1.325100e+07
Property Plant Equipment 7.021800e+07
Total Current Assets 2.452381e+09
Long Term Investments 3.986633e+09
Net Tangible Assets 1.362067e+09
Short Term Investments 2.625800e+07
Accounts Payable 1.277949e+10
Other Current Assets 3.512400e+07
Retained Earnings 8.269410e+08
Deferred Long Term Asset Charges NaN
Net Receivables 4.071000e+07 ]]

['quarterly_cashflow', 2022-03-31 2021-12-31 \
Net Income 45560000.0 47696000.0
Change To Liabilities 0.0 0.0
Investments NaN -862160000.0
Total Cashflows From Investing Activities NaN -894601000.0
Net Borrowings NaN -14910000.0
Total Cash From Financing Activities NaN 7124000.0
Change To Operating Activities NaN 2916000.0
Issuance Of Stock NaN 291000.0
Change In Cash NaN -828815000.0
Repurchase Of Stock NaN -91000.0
Total Cash From Operating Activities NaN 58662000.0
Depreciation NaN 717000.0
Other Cashflows From Investing Activities NaN 1293000.0
Dividends Paid NaN -24392000.0
Other Cashflows From Financing Activities NaN 46226000.0
Change To Netincome NaN 7333000.0
Capital Expenditures NaN -2399000.0

2021-09-30 2021-06-30
Net Income 49753000.0 51179000.0
Change To Liabilities 0.0 0.0
Investments -378753000.0 -38963000.0
Total Cashflows From Investing Activities -146757000.0 175741000.0
Net Borrowings 81372000.0 41087000.0
Total Cash From Financing Activities 3103740000.0 607064000.0
Change To Operating Activities 15390000.0 -29432000.0
Issuance Of Stock 22000.0 73000.0
Change In Cash 229498000.0 806566000.0
Repurchase Of Stock -7712000.0 -32000.0
Total Cash From Operating Activities 65881000.0 23761000.0
Depreciation -2305000.0 -1312000.0
Other Cashflows From Investing Activities 1293000.0 -18941000.0
Dividends Paid -24467000.0 -24466000.0
Other Cashflows From Financing Activities 261159000.0 590402000.0
Change To Netincome 3043000.0 3326000.0
Capital Expenditures 21000.0 -1637000.0 ]
['quarterly_earnings', Revenue Earnings
Quarter
```

```

2Q2021 121724000 51179000
3Q2021 117782000 49753000
4Q2021 110880000 47696000
1Q2022 121096000 45560000]
['quarterly_financials',
Research Development      None    None    None
Effect Of Accounting Charges None    None    None
Income Before Tax          63366000.0 66800000.0 69683000.0
Minority Interest           None    None    None
Net Income                  45560000.0 47696000.0 49753000.0
Selling General Administrative 45525000.0 40640000.0 40366000.0
Gross Profit                121096000.0 110880000.0 117782000.0
Ebit                         0.0     0.0     0.0
Operating Income             70494000.0 64945000.0 72506000.0
Other Operating Expenses     5077000.0 5295000.0 4910000.0
Interest Expense              None    None    None
Extraordinary Items           None    None    None
Non Recurring                 None    None    None
Other Items                   None    None    None
Income Tax Expense            17806000.0 19104000.0 19930000.0
Total Revenue                 121096000.0 110880000.0 117782000.0
Total Operating Expenses      50602000.0 45935000.0 45276000.0
Cost Of Revenue                 0.0     0.0     0.0
Total Other Income Expense Net -7128000.0 1855000.0 -2823000.0
Discontinued Operations        None    None    None
Net Income From Continuing Ops 45560000.0 47696000.0 49753000.0
Net Income Applicable To Common Shares 45560000.0 47499000.0 49526000.0

```

2021-06-30

```

Research Development      None
Effect Of Accounting Charges None
Income Before Tax          71679000.0
Minority Interest           None
Net Income                  51179000.0
Selling General Administrative 40489000.0
Gross Profit                121724000.0
Ebit                         0.0
Operating Income             77346000.0
Other Operating Expenses     3889000.0
Interest Expense              None
Extraordinary Items           None
Non Recurring                 None
Other Items                   None
Income Tax Expense            20500000.0
Total Revenue                 121724000.0
Total Operating Expenses      44378000.0
Cost Of Revenue                 0.0
Total Other Income Expense Net -5667000.0
Discontinued Operations        None
Net Income From Continuing Ops 51179000.0
Net Income Applicable To Common Shares 50942000.0 ]

```

Holder Shares Date Reported \

```

0          iShares Core S&P Smallcap ETF 8960862 2022-01-30
1          Neuberger & Berman Genesis Fund 3665105 2022-02-27
2          Vanguard Total Stock Market Index Fund 3663017 2021-12-30
3          Vanguard Small-Cap Index Fund 3240182 2021-12-30
4          iShares Russell 2000 ETF 3000907 2022-01-30
5          iShares S&P Smallcap 600 Value ETF 2118512 2022-01-30
6          Vanguard Small Cap Value Index Fund 2055670 2021-12-30
7          Allspring Special Small Cap Value Fund 1855074 2022-02-27
8          Vanguard Extended Market Index Fund 1718314 2021-12-30
9          Advisors Inner Circle Fund II-Champlain Small ... 1500000 2021-12-30

```

% Out	Value
0 0.0635	197407789
1 0.0260	86423175
2 0.0260	78425193
3 0.0230	69372296
4 0.0213	66109981
5 0.0150	46670819
6 0.0146	44011894
7 0.0132	43742644
8 0.0122	36789102
9 0.0106	32115000]

symbol: EOG

sector: Energy

Index: SP500

vol_30d_2yr: 97142371.875

Sector 1YMF: -13.280006408691406

1YMF: -13.280006408691406

risk trend factor: -0.3089810463346336

beta currentRatio debtToEquity dividendRate dividendYield \
EOG 1.658348 1.354 24.707 3 0.0269

earningsGrowth ebitda ebitdaMargins forwardPE freeCashflow \
EOG -0.422 9639999488 0.42867 7.694572 3687624960

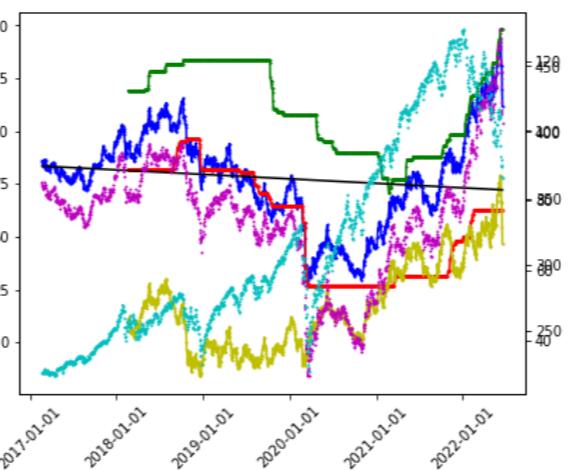
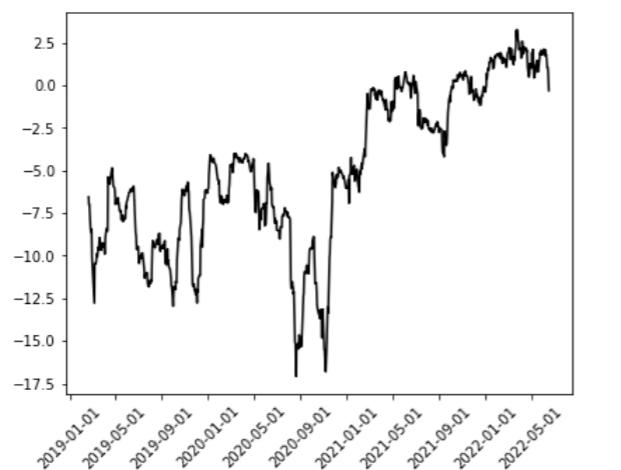
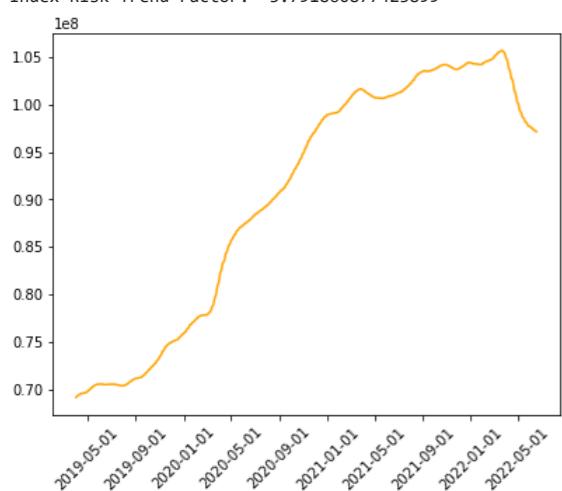
grossMargins	grossProfits	heldPercentInstitutions	industry	\		
EOG	0.67685	13034000000	0.89124	Oil & Gas E&P		
marketCap	operatingCashflow	operatingMargins	payoutRatio	pegRatio	\	
EOG	68909137920	7749000192	0.25347	0.265	0.57	
priceToBook	priceToSalesTrailing12Months	profitMargins	quickRatio	\		
EOG	3.198836	3.064263	0.19464	1.153		
returnOnAssets	returnOnEquity	revenueGrowth	revenuePerShare	sector	\	
EOG	0.09594	0.20694	0.667	38.672	Energy	
sharesOutstanding	shortRatio	totalCash	totalCashPerShare	totalDebt	\	
EOG	585713024	1.67	4008999936	6.845	5321999872	
totalRevenue	trailingPE					
EOG	22488000512	15.697132				
Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d lower

2022-06-17 111.660008 115.8007 123.177117 150.544535 123.426947 8.610863 106.205121 140.649573

volume_factor latest_p vol_30d_2yr pct_2yr adf hurst

EOG	0.966433	111.669998	97142371.875	0.688961	0.620184	0.481502
l axis		r axis				
		legend				
blue	symbol			magenta	sector	
green	trailing_1yr_max			cyan	index	
red	trailing_1yr_min					
orange	30d_vol_2yr					
black	risk_trend_factor/linear					

```
yellow      supply_trend_1yr  
Sector 1YMF: -3.82000732421875  
Sector Volume Factor: 0.8966412344901694  
Sector Risk Trend Factor: -0.12330558135216596  
Index 1YMF: -287.8400573730469  
Index Volume Factor: 1.1835166983613057  
Index Risk Trend Factor: -3.791868877423899
```



ets next 13 weeks

2022-06-17

2022-06-28

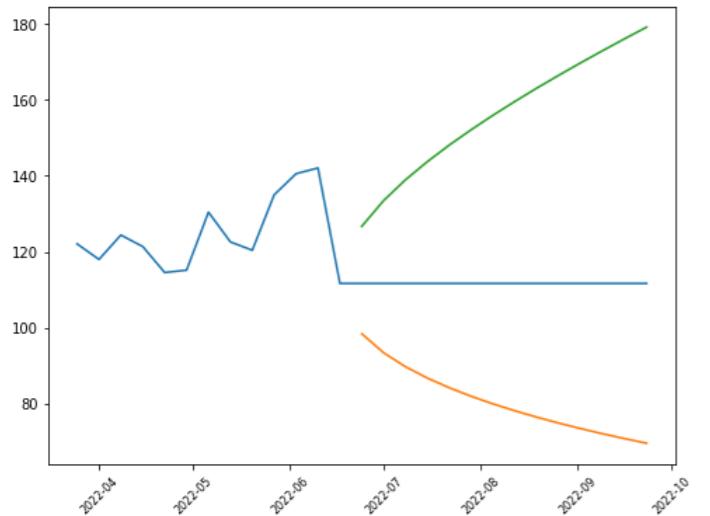
inner cv scores:

best model: [None]

best inner cv score

test cv mean error, st
call date: 2022-06-24

```
sell date: 2022-06-24
expected return: 2.406129058025341e-05
discounted return: 8.020365867000834e-06
quarter return: 1.0007381429943254
```



```
['options', ('2022-07-15', '2023-01-20', '2024-01-19', '2026-03-20')]
['sustainability', Value]
```

```
2022-5
palmOil False
controversialWeapons False
gambling False
socialScore 8.13
nuclear False
furLeather False
alcoholic False
gmo False
catholic False
socialPercentile None
peerCount 66
governanceScore 7.73
environmentPercentile None
animalTesting False
tobacco False
totalEsg 36.25
highestControversy 1
esgPerformance OUT_PERF
coal False
pesticides False
adult False
percentile 81.37
peerGroup Oil & Gas Producers
smallArms False
environmentScore 20.39
governancePercentile None
militaryContract False]
```

```
symbol: CYTK
sector: Healthcare
Index: SP600
```

```
vol_30d_2yr: 23676993.75
```

```
Sector 1YMF: -4.1999969482421875
```

```
1YMF: -4.1999969482421875
```

```
risk trend factor: -0.373330620659722
```

```
    beta currentRatio debtToEquity      ebitda ebitdaMargins forwardPE \
CYTK  1.22366   9.328   279.088  -220479008     0 -9.596244
```

```
    freeCashflow grossMargins grossProfits heldPercentInstitutions \
CYTK  -149753248   -1.68057   -89510000     1.14096
```

```
    industry marketCap operatingCashflow operatingMargins \
CYTK  Biotechnology 3501462016   -139814000     -3.43789
```

```
    payoutRatio pegRatio priceToBook priceToSalesTrailing12Months \
CYTK  0   -0.6   30.080944     53.84545
```

```
    profitMargins quickRatio returnOnAssets returnOnEquity revenueGrowth \
CYTK  0   9.201   -0.19497   -2.79897     -0.825
```

```
    revenuePerShare sector sharesOutstanding shortRatio totalCash \
CYTK  0.809  Healthcare 85652200     9.63  608974016
```

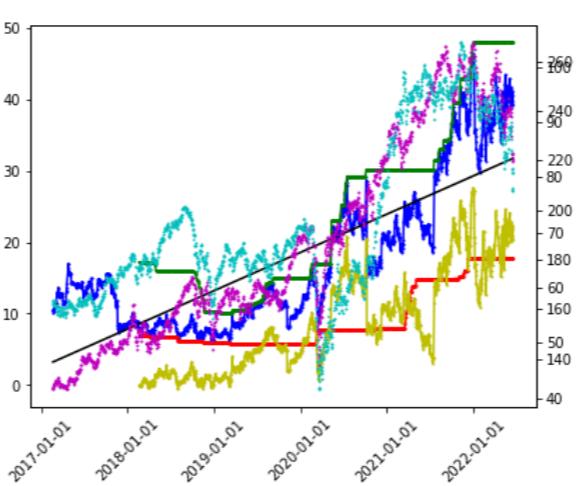
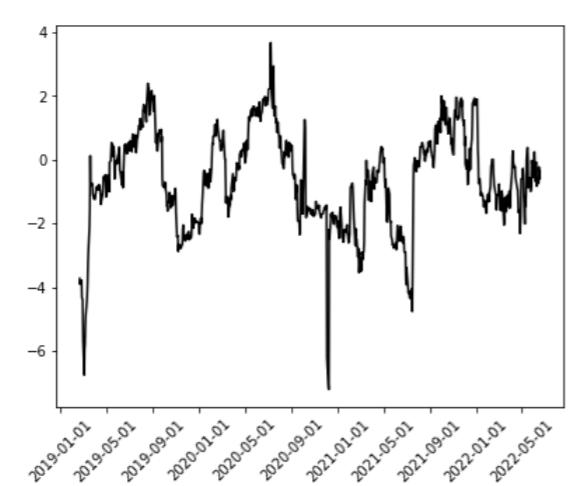
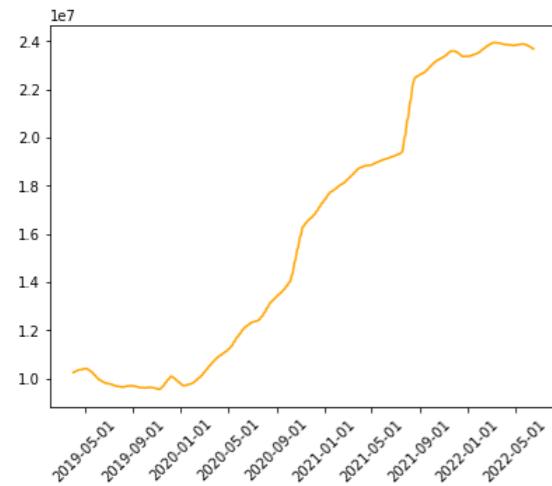
```
    totalCashPerShare totalDebt totalRevenue
CYTK  7.11  324471008  65028000
```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	40.580002	37.816359	39.913492	42.010626	39.092064	2.21228	34.667503	43.516624

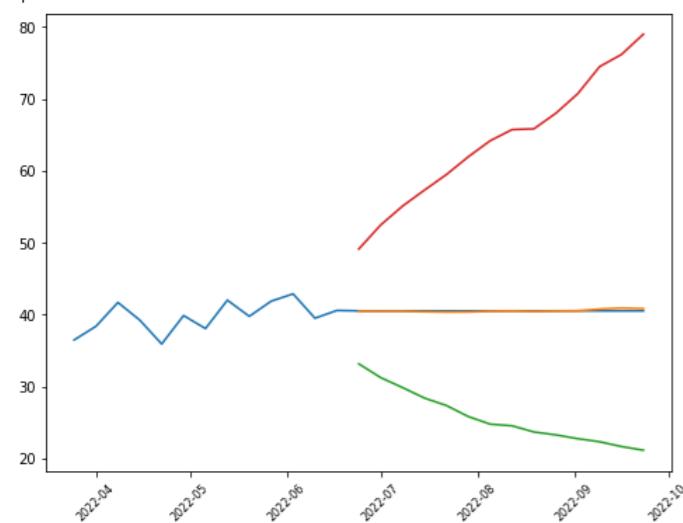
volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst	
CYTK	0.618546	40.580002	23676993.75	0.779452	0.984005	0.353422

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Sector 1YMF: -122.20997619628906
Sector Volume Factor: 1.2238851152317325
Sector Risk Trend Factor: -3.3236323632363236
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592



ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, 'mul', True]
best inner cv score, sdev (11 folds): 24.198114096778138 21.54399713821928
test cv mean error, stdev (10 folds): 25.432198910013973 22.22173663129422
sell date: 2022-09-23
expected return: -0.001545210977896332
discounted return: -1.6450992847194534e-05
quarter return: 0.9984876409779567



```
[ 'options', ('2022-08-19', '2023-01-20', '2024-01-19') ]
symbol: ULTA
sector: Consumer Cyclical
Index: SP500
vol_30d_2yr: 17968125.78125
Sector 1YMF: -40.080047607421875
1YMF: -40.080047607421875
risk trend factor: -0.40616171652986643
    beta currentRatio debtToEquity earningsGrowth ebitda \
ULTA 1.65196     1.464     120.281      0.789 1561005056

    ebitdaMargins forwardPE freeCashflow grossMargins grossProfits \
ULTA 0.18086 22.416761 763609024 0.43536 3757531000

    heldPercentInstitutions industry marketCap operatingCashflow \
ULTA 0.92322 Specialty Retail 21716271104 1059265024

    operatingMargins payoutRatio pegRatio priceToBook \
ULTA 0.14987     0     0.46 10.940372

    priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
ULTA 2.51611     0.11422 0.427 0.16407

    returnOnEquity revenueGrowth revenuePerShare sector \
ULTA 0.55777     0.241 158.417 Consumer Cyclical

    sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
ULTA 54120200 1.74 431560000 8.247 1846755968

    totalRevenue trailingPE
ULTA 8630889472 25.71685
```

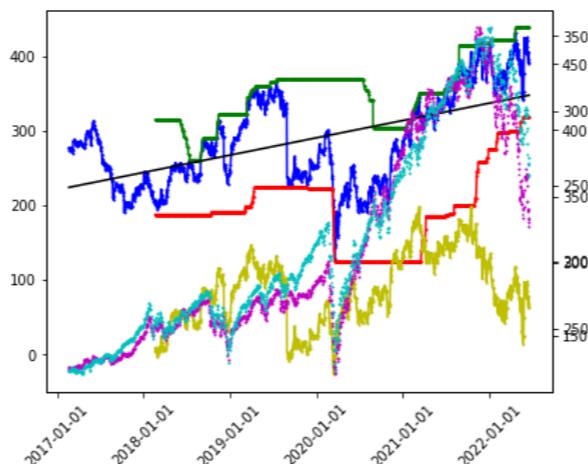
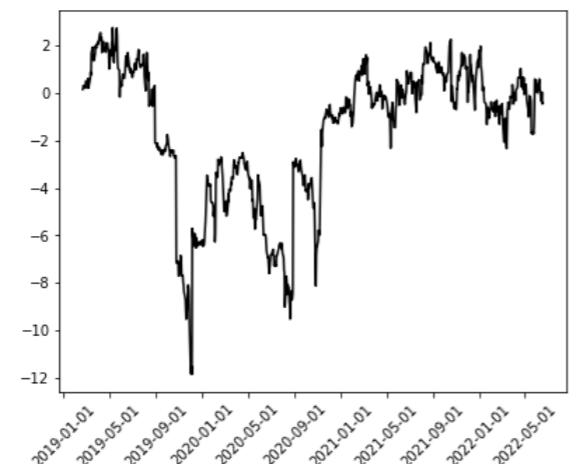
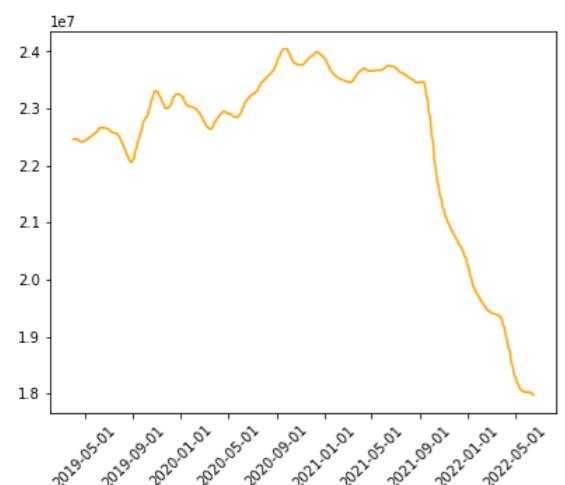
	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	395.829987	334.79461	392.247617	449.700624	397.276032	20.780001	355.716031	438.836034

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst	
ULTA	1.308411	395.829987	17968125.78125	0.830576	0.517356	0.398236

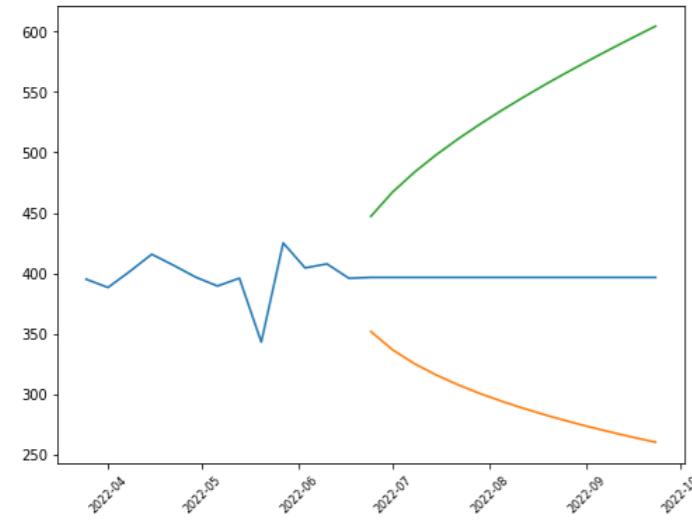
I axis r axis

legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Sector 1YMF: -359.96002197265625
Sector Volume Factor: 1.2928194874233667
Sector Risk Trend Factor: -4.72140697901556
Index 1YMF: -287.8400573738469
Index Volume Factor: 1.1835166983613057
Index Risk Trend Factor: -3.791860877423899



```
ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, None]
best inner cv score, sdev (11 folds): 2384.3378388856313 3651.6916832915776
test cv mean error, stdev (10 folds): 2511.0624246859807 3806.7948510123306
sell date: 2022-06-24
expected return: 0.0018819646540376282
discounted return: 0.0006269284299538214
quarter return: 1.0593540581813732
```



```
[ 'quarterly_balance_sheet', 2022-01-29 2021-10-30 2021-07-31 \
Intangible Assets 1.538000e+06 1.770000e+06 2.001000e+06
Capital Surplus 9.349450e+08 9.158140e+08 8.892060e+08
Total Liab 3.229006e+09 3.300967e+09 3.074772e+09
Total Stockholder Equity 1.535373e+09 1.986800e+09 1.879813e+09
Deferred Long Term Liab 2.259600e+07 NaN NaN
Other Current Liab 3.663650e+08 2.726280e+08 3.093070e+08
Total Assets 4.764379e+09 5.287767e+09 4.954585e+09
Common Stock 5.300000e+05 5.490000e+05 5.510000e+05
Other Current Assets 5.909000e+06 3.750100e+07 1.854400e+07
Retained Earnings 6.533760e+08 1.123749e+09 1.034831e+09
Other Liab 9.835800e+07 1.109300e+08 1.077000e+08
Good Will 1.087000e+07 1.087000e+07 1.087000e+07
Treasury Stock -5.347800e+07 -5.331200e+07 -4.477500e+07
Other Assets 7.138500e+07 6.542100e+07 6.396100e+07
Cash 4.315600e+08 6.050530e+08 7.701440e+08
Total Current Liabilities 1.558010e+09 1.624116e+09 1.381533e+09
Property Plant Equipment 2.396732e+09 2.373198e+09 2.379673e+09
Total Current Assets 2.281183e+09 2.833693e+09 2.494934e+09
Long Term Investments 2.671000e+06 2.815000e+06 3.146000e+06
Net Tangible Assets 1.522965e+09 1.974160e+09 1.866942e+09
Net Receivables 2.336820e+08 1.692120e+08 1.544160e+08
Inventory 1.499218e+09 1.916343e+09 1.443685e+09
Accounts Payable 5.527300e+08 7.474510e+08 5.352570e+08

2021-05-01
Intangible Assets 2.233000e+06
Capital Surplus 8.613120e+08
Total Liab 3.242827e+09
Total Stockholder Equity 1.844717e+09
Deferred Long Term Liab NaN
Other Current Liab 4.278950e+08
Total Assets 5.087544e+09
Common Stock 5.580000e+05
Other Current Assets NaN
Retained Earnings 1.027414e+09
Other Liab 1.067550e+08
Good Will 1.087000e+07
Treasury Stock -4.456700e+07
Other Assets 5.938200e+07
Cash 9.474560e+08
Total Current Liabilities 1.522763e+09
Property Plant Equipment 2.448056e+09
Total Current Assets 2.563756e+09
Long Term Investments 3.247000e+06
Net Tangible Assets 1.831614e+09
Net Receivables 1.543420e+08
Inventory 1.353565e+09
Accounts Payable 5.528370e+08 ]
[ 'quarterly_cashflow', 2022-01-29 2021-10-30 \
Investments -4297000.0 -4297000.0
Change To Liabilities -118997000.0 213910000.0
Total Cashflows From Investing Activities -68066000.0 -51113000.0
Total Cash From Financing Activities -749835000.0 -127422000.0
Change To Operating Activities -40398000.0 -66587000.0
Issuance Of Stock 10089000.0 7489000.0
Net Income 289366000.0 215289000.0
Change In Cash -173493000.0 -165091000.0
Repurchase Of Stock -759924000.0 -134911000.0
Total Cash From Operating Activities 644408000.0 13444000.0
Depreciation 62800000.0 65157000.0
Change To Inventory 417125000.0 -472658000.0
Change To Account Receivables -64470000.0 -14796000.0
Change To Netincome 53681000.0 92002000.0
Capital Expenditures -63769000.0 -51113000.0
Effect Of Exchange Rate NaN NaN

2021-07-31 2021-05-01
Investments -4297000.0 -4297000.0
Change To Liabilities -21848000.0 72287000.0
Total Cashflows From Investing Activities -22742000.0 -34563000.0
Total Cash From Financing Activities -225916000.0 -394043000.0
Change To Operating Activities -81403000.0 -48028000.0
Issuance Of Stock 17776000.0 5032000.0
Net Income 250893000.0 230289000.0
Change In Cash -177312000.0 -98595000.0
Repurchase Of Stock -243692000.0 -399075000.0
Total Cash From Operating Activities 71346000.0 330067000.0
Depreciation 68978000.0 70599000.0
Change To Inventory -90120000.0 -185350000.0
Change To Account Receivables -74000.0 38767000.0
Change To Netincome 77425000.0 80072000.0
Capital Expenditures -22742000.0 -34563000.0
Effect Of Exchange Rate NaN -56000.0 ]
[ 'quarterly_earnings', Revenue Earnings
Quarter
```

```

2Q2021 1938519000 230289000
3Q2021 1967207000 250893000
4Q2021 1995775000 215289000
1Q2022 2729388000 289366000]
['quarterly_financials',
Research Development None None
Effect Of Accounting Charges None None
Income Before Tax 375155000.0 283826000.0
Minority Interest None None
Net Income 289366000.0 215289000.0
Selling General Administrative 1038945000.0 504037000.0
Gross Profit 1416306000.0 789474000.0
Ebit 375622000.0 283605000.0
Operating Income 375622000.0 283605000.0
Other Operating Expenses None None
Interest Expense -467000.0 -413000.0
Extraordinary Items None None
Non Recurring None None
Other Items None None
Income Tax Expense 85789000.0 68537000.0
Total Revenue 2729388000.0 1995775000.0
Total Operating Expenses 2353766000.0 1712170000.0
Cost Of Revenue 1313082000.0 1206301000.0
Total Other Income Expense Net -467000.0 221000.0
Discontinued Operations None None
Net Income From Continuing Ops 289366000.0 215289000.0
Net Income Applicable To Common Shares 289366000.0 215289000.0

2021-07-31 2021-05-01
Research Development None None
Effect Of Accounting Charges None None
Income Before Tax 331882000.0 304966000.0
Minority Interest None None
Net Income 250893000.0 230289000.0
Selling General Administrative 465347000.0 446214000.0
Gross Profit 797963000.0 753788000.0
Ebit 331259000.0 302985000.0
Operating Income 331259000.0 302985000.0
Other Operating Expenses None None
Interest Expense -425000.0 -358000.0
Extraordinary Items None None
Non Recurring None None
Other Items None None
Income Tax Expense 80989000.0 74677000.0
Total Revenue 1967207000.0 1938519000.0
Total Operating Expenses 1635948000.0 1635534000.0
Cost Of Revenue 1169244000.0 1184731000.0
Total Other Income Expense Net 623000.0 1981000.0
Discontinued Operations None None
Net Income From Continuing Ops 250893000.0 230289000.0
Net Income Applicable To Common Shares 250893000.0 230289000.0 ]
['mutualfund_holders',
Holder Shares Date Reported % Out \
0 Vanguard Total Stock Market Index Fund 1544846 2021-12-30 0.0296
1 Vanguard Mid-Cap Index Fund 1229135 2021-12-30 0.0235
2 Vanguard 500 Index Fund 1151274 2021-12-30 0.0220
3 SPDR S&P 500 ETF Trust 580910 2022-01-30 0.0111
4 Legg Mason Clearbridge Large Cap Growth Fd 569422 2022-02-27 0.0109
5 Fidelity 500 Index Fund 556669 2022-02-27 0.0107
6 Eaton Vance Atlanta Capital SMID-Cap Fd 537510 2021-12-30 0.0103
7 MFS Mid Cap Growth Fund 463397 2022-02-27 0.0089
8 iShares Core S&P 500 ETF 447715 2022-01-30 0.0086
9 Vanguard Growth Index Fund 431505 2021-12-30 0.0083

Value
0 637001799
1 506821525
2 474716321
3 211300203
4 213248539
5 208472540
6 221636873
7 173542176
8 162851854
9 177926771 ]
['options', ('2023-01-20', '2024-01-19')]
['sustainability', Value
2022-5
palmOil False
controversialWeapons False
gambling False
socialScore 7.23
nuclear False
furLeather False
alcoholic False
gmo False
catholic False

```

```

socialPercentile          0
peerCount                 57
governanceScore           5.01
environmentPercentile     0
animalTesting              False
tobacco                   False
totalEsg                  16.07
highestControversy         2
esgPerformance            LAG_PERF
coal                       False
pesticides                False
adult                      False
percentile                12.44
peerGroup                 Retailing
smallArms                 False
environmentScore           3.83
governancePercentile      0
militaryContract           False]
symbol: EQT
sector: Energy
Index: SP400
vol_30d_2yr: 138427084.1796875
Sector 1YMF: -6.420003890991211
1YMF: -6.420003890991211
risk trend factor: -0.4065866699651676
    beta currentRatio debtToEquity dividendRate dividendYield \
EQT  0.947822      0.398      61.543      0.5      0.013

    ebitda ebitdaMargins forwardPE freeCashflow grossMargins \
EQT  -1089323008     -0.13465   5.869218   2408109568      0.734

    grossProfits heldPercentInstitutions industry marketCap \
EQT  4672261000      0.96148 Oil & Gas E&P 13598924800

    operatingCashflow operatingMargins pegRatio priceToBook \
EQT  2283751936      -0.3565     0.23     1.658629

    priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
EQT  1.680979      -0.32564     0.162     -0.09046

    returnOnEquity revenueGrowth revenuePerShare sector sharesOutstanding \
EQT  -0.3018       1.206      23.313 Energy      369536000

    shortRatio totalCash totalCashPerShare totalDebt totalRevenue
EQT  2.55 16913000      0.046 5050277888 8089885184

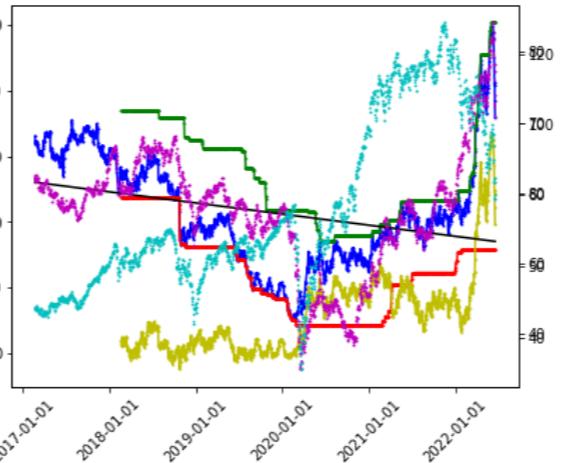
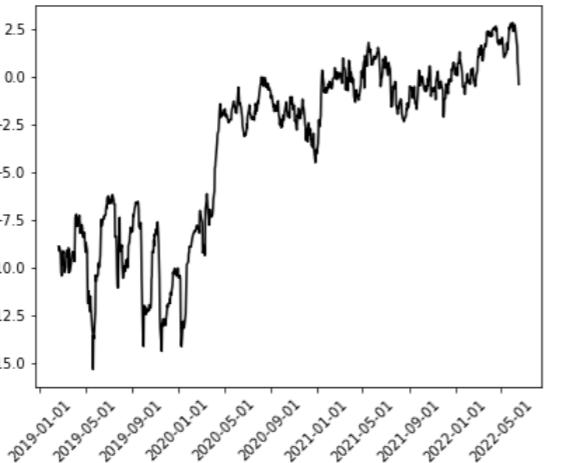
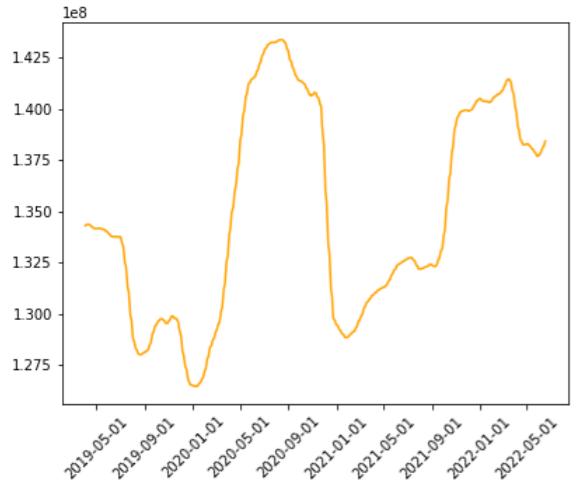
```

	Adj	Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	35.939999	37.757538	45.406984	53.05643	40.584762	5.367299	29.850164	51.31936	

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
EQT	1.286201	35.939999	138427084.179688	0.637252	0.584446	0.494719

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

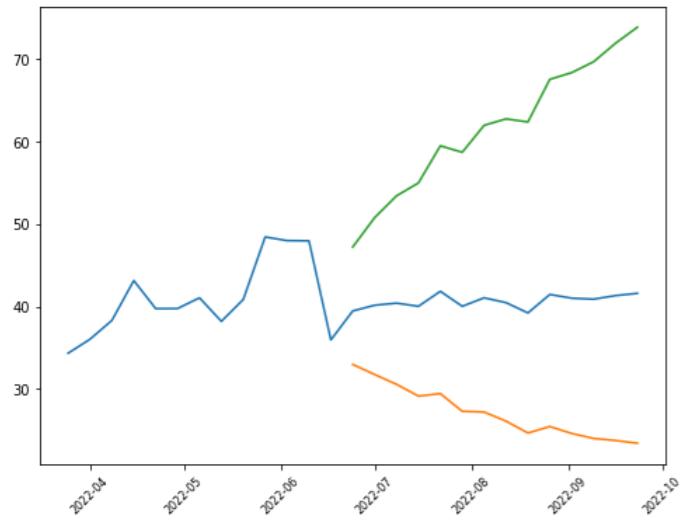
Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -69.05999755859375
Index Volume Factor: 0.5765983741853883
Index Risk Trend Factor: -5.134573474205833



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'add', False]
best inner cv score, sdev (11 folds): 30.03174851094026 49.88330858570821
test cv mean error, stdev (10 folds): 32.88875485041887 51.452814793162084
sell date: 2022-07-22
expected return: 0.16419553707542073
discounted return: 0.004916249238700265
quarter return: 1.5701745055098832

```



```

['options', ('2023-01-20', '2024-01-19')]                                     Value
['sustainability',
2022-5
palmOil                         False
controversialWeapons             False
gambling                          False
socialScore                       10.21
nuclear                           False
furLeather                         False
alcoholic                          False
gmo                                False
catholic                           False
socialPercentile                  None
peerCount                          66
governanceScore                   7.64
environmentPercentile              None
animalTesting                      False
tobacco                            False
totalEsg                           37.38
highestControversy                 1
esgPerformance                    OUT_PERF
coal                               False
pesticides                          False
adult                              False
percentile                         83.58
peerGroup                          Oil & Gas Producers
smallArms                          False
environmentScore                   19.53
governancePercentile               None
militaryContract                   False]
symbol: PTEN
sector: Energy
Index: SP600
vol_30d_2yr: 69871969.140625
Sector 1YMF: -2.760000228881836
1YMF: -2.760000228881836
risk trend factor: -0.41071430345376264
    beta debtToEquity dividendRate dividendYield      ebitda \
PTEN  2.627941        54.509       0.16        0.0106  276845504

    ebitdaMargins  forwardPE grossMargins grossProfits \
PTEN      0.17031 -20.246914      0.21108   275133000

    heldPercentInstitutions      industry marketCap operatingMargins \
PTEN      0.95024 Oil & Gas Drilling  3527836672      -0.18594

    pegRatio priceToBook priceToSalesTrailing12Months profitMargins \
PTEN      2.03     1.796669          2.170273      -0.3549

    revenueGrowth revenuePerShare sector sharesOutstanding shortRatio \
PTEN      1.114        8.05 Energy      215112000       2.94

    totalCash totalCashPerShare totalDebt totalRevenue
PTEN  117524000          0.546  877321984  1625527040

Adj Close  21dBOLD  21dMA-TP  21dBOLU  90dSMA  90dSDev  90d_lower  90d_upper
2022-06-17  15.24  15.042063  17.914127  20.786191  16.707143  1.496207  13.714728  19.699558

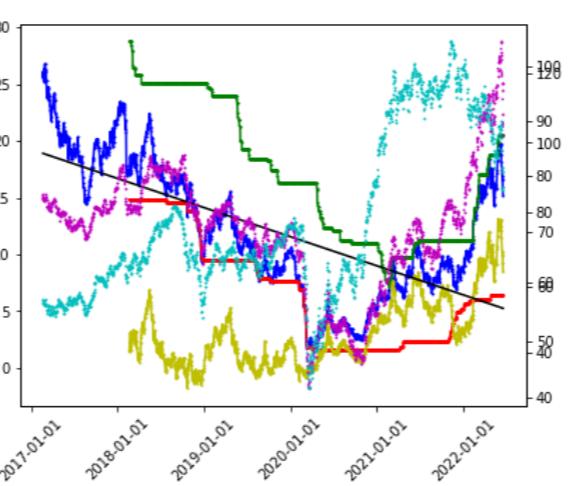
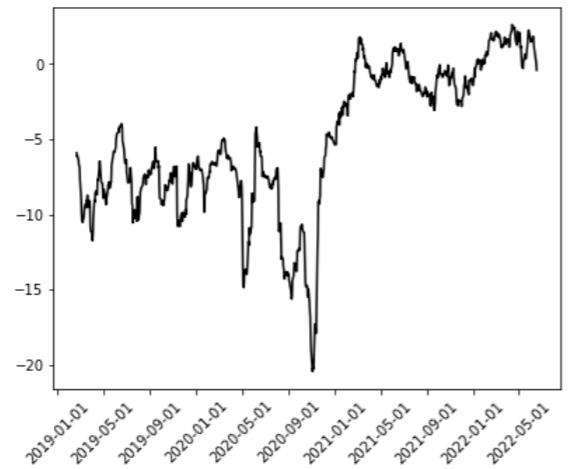
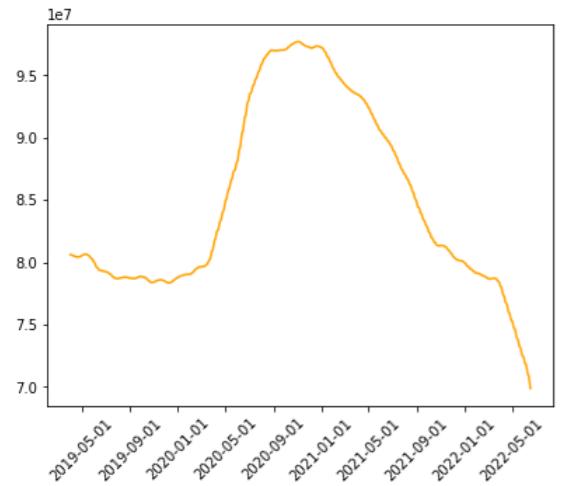
```

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurs
PTEN	1.071603	15.24	69871969	140625	0.70854	0.193969

I axis	r axis
legend	legend
blue	symbol
green	trailing_1yr_max

red	trailing_1yr_min
orange	30d_vol_2yr
black	risk_trend_factor/linear
yellow	supply_trend_1yr

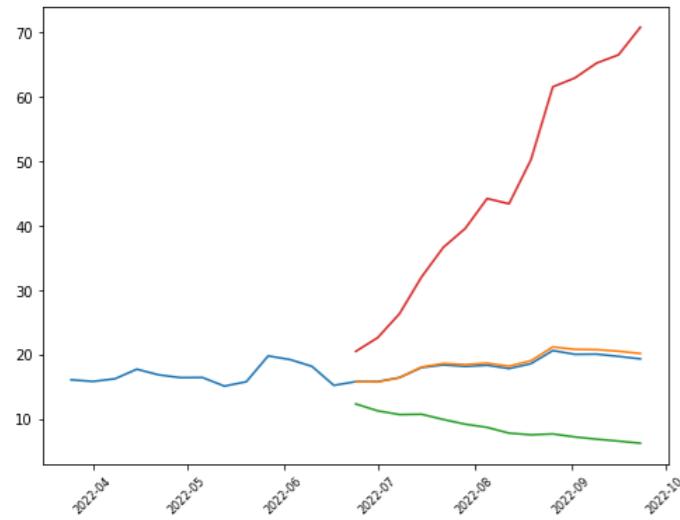
```
yellow          supply_trend_1yr  
Sector 1YMF: -3.82000732421875  
Sector Volume Factor: 0.8966412344901694  
Sector Risk Trend Factor: -0.12330558135216596  
Index 1YMF: -77.27001953125  
Index Volume Factor: 1.232760496116622  
Index Risk Trend Factor: -5.242290185196592
```



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['mul', 'mul', True]
best inner cv score, sdev (11 folds): 5.1905371059767305 4.645520582620765
test cv mean error, stdev (10 folds): 5.6024699947924015 4.676791397185186
sell date: 2022-08-26
expected return: 0.35442623689479164
discounted return: 0.0046072159340382335
quarter return: 1.52636705556924753

```



	2022-03-31	2021-12-31	2021-09-30	\
['quarterly_balance_sheet',				
Total Stockholder Equity	1.609487e+09	1.609487e+09	1.725645e+09	
Net Tangible Assets	1.601950e+09	1.601950e+09	1.704593e+09	
Intangible Assets	NaN	7.537000e+06	2.105200e+07	
Capital Surplus	NaN	3.171536e+09	2.919090e+09	
Total Liab	NaN	1.348361e+09	1.291818e+09	
Other Current Liab	NaN	6.839800e+07	7.884000e+06	
Total Assets	NaN	2.957848e+09	3.017463e+09	
Common Stock	NaN	2.993000e+06	2.729000e+06	
Other Current Assets	NaN	6.762000e+07	5.407400e+07	
Retained Earnings	NaN	-1.983160e+08	1.678600e+08	
Other Liab	NaN	4.207700e+07	3.506700e+07	
Treasury Stock	NaN	-1.366726e+09	-1.364034e+09	
Other Assets	NaN	1.587900e+07	1.277800e+07	
Cash	NaN	1.175240e+08	1.912840e+08	
Total Current Liabilities	NaN	4.358530e+08	3.388490e+08	
Deferred Long Term Asset Charges	NaN	3.975000e+06	NaN	
Other Stockholder Equity	NaN	5.915000e+06	5.853000e+06	
Property Plant Equipment	NaN	2.350779e+09	2.440101e+09	
Total Current Assets	NaN	5.836530e+08	5.435320e+08	
Net Receivables	NaN	3.561500e+08	2.632500e+08	
Long Term Debt	NaN	8.523230e+08	9.021040e+08	
Inventory	NaN	4.235900e+07	3.492400e+07	
Accounts Payable	NaN	1.902190e+08	1.657790e+08	
	2021-06-30			
Total Stockholder Equity	1.807717e+09			
Net Tangible Assets	1.783660e+09			
Intangible Assets	2.405700e+07			
Capital Surplus	2.914043e+09			
Total Liab	1.265589e+09			
Other Current Liab	8.314000e+06			
Total Assets	3.073306e+09			
Common Stock	2.728000e+06			
Other Current Assets	6.092900e+07			
Retained Earnings	2.546960e+08			
Other Liab	5.306100e+07			
Treasury Stock	-1.363750e+09			
Other Assets	1.286000e+07			
Cash	2.166820e+08			
Total Current Liabilities	2.934820e+08			
Deferred Long Term Asset Charges	NaN			
Other Stockholder Equity	6.085000e+06			
Property Plant Equipment	2.528289e+09			
Total Current Assets	5.081000e+08			
Net Receivables	1.967260e+08			
Long Term Debt	9.018960e+08			
Inventory	3.376300e+07			
Accounts Payable	1.208530e+08]		
	2022-03-31	2021-12-31	\	
['quarterly_cashflow',				
Net Income	-28777000.0	-361825000.0		
Change To Liabilities	0.0	0.0		
Total Cashflows From Investing Activities	NaN	NaN		
Total Cash From Financing Activities	NaN	NaN		
Change To Operating Activities	NaN	NaN		
Change In Cash	NaN	NaN		
Repurchase Of Stock	NaN	NaN		
Effect Of Exchange Rate	NaN	NaN		
Total Cash From Operating Activities	NaN	NaN		
Depreciation	NaN	NaN		
Other Cashflows From Investing Activities	NaN	NaN		
Dividends Paid	NaN	NaN		
Change To Inventory	NaN	NaN		
Change To Account Receivables	NaN	NaN		
Change To Netincome	NaN	NaN		
Capital Expenditures	NaN	NaN		
	2021-09-30	2021-06-30		
Net Income	-82998000.0	-103309000.0		
Change To Liabilities	24892000.0	25082000.0		
Total Cashflows From Investing Activities	-28973000.0	-25736000.0		
Total Cash From Financing Activities	-3832000.0	-7291000.0		
Change To Operating Activities	-2711000.0	1975000.0		
Change In Cash	-25398000.0	2538000.0		
Repurchase Of Stock	-52000.0	-3522000.0		
Effect Of Exchange Rate	6000.0	-10000.0		
Total Cash From Operating Activities	7401000.0	35575000.0		
Depreciation	141065000.0	144037000.0		
Other Cashflows From Investing Activities	-122000.0	-118000.0		
Dividends Paid	-3780000.0	-3769000.0		
Change To Inventory	7909000.0	-3598000.0		
Change To Account Receivables	-66803000.0	-15561000.0		
Change To Netincome	-14170000.0	-13354000.0		
Capital Expenditures	-34264000.0	-38050000.0]	
	Revenue	Earnings		
['quarterly_earnings',				
Quarter				

```

2Q2021 291774000 -103309000
3Q2021 357885000 -82998000
4Q2021 466493000 -361825000
1Q2022 509375000 -287770000]
['quarterly_financials',
 2022-03-31 2021-12-31 2021-09-30 \
Research Development      None    None    None
Effect Of Accounting Charges  None    None    None
Income Before Tax          -27849000.0 -372475000.0 -100641000.0
Minority Interest           None    None    None
Net Income                  -28777000.0 -361825000.0 -82998000.0
Selling General Administrative 27461000.0 24206000.0 22063000.0
Gross Profit                126163000.0 87596000.0 72818000.0
Ebit                         -17018000.0 -83810000.0 -90531000.0
Operating Income             -17018000.0 -83810000.0 -90531000.0
Other Operating Expenses     -1218000.0 4506000.0 221000.0
Interest Expense              -10565000.0 -10582000.0 -10683000.0
Extraordinary Items           None    None    None
Non Recurring                 None    None    None
Other Items                   None    None    None
Income Tax Expense            928000.0 -8116000.0 -17643000.0
Total Revenue                 509375000.0 466493000.0 357885000.0
Total Operating Expenses      526393000.0 550303000.0 448416000.0
Cost Of Revenue               383212000.0 378897000.0 285067000.0
Total Other Income Expense Net -10831000.0 -288665000.0 -10110000.0
Discontinued Operations       NaN    2534000.0 2534000.0
Net Income From Continuing Ops -28777000.0 -364359000.0 -82998000.0
Net Income Applicable To Common Shares -28777000.0 -361825000.0 -82998000.0

```

2021-06-30

```

Research Development      None
Effect Of Accounting Charges  None
Income Before Tax          -119282000.0
Minority Interest           None
Net Income                  -103309000.0
Selling General Administrative 23555000.0
Gross Profit                56541000.0
Ebit                         -111332000.0
Operating Income             -111332000.0
Other Operating Expenses     281000.0
Interest Expense              -10704000.0
Extraordinary Items           None
Non Recurring                 None
Other Items                   None
Income Tax Expense            -15973000.0
Total Revenue                 291774000.0
Total Operating Expenses      403106000.0
Cost Of Revenue               235233000.0
Total Other Income Expense Net -7950000.0
Discontinued Operations       2534000.0
Net Income From Continuing Ops -103309000.0
Net Income Applicable To Common Shares -103309000.0 ]

```

Holder Shares Date Reported \

0	iShares Core S&P Smallcap ETF	15130515	2022-01-30
1	VanEck ETF Trust-VanEck Oil Services ETF	12063228	2022-02-27
2	Undiscovered Managers Behavioral Value Fund	6883296	2021-12-30
3	Delaware Group Equity Fds V-Small Cap Core Fund	5291987	2022-02-27
4	Vanguard Total Stock Market Index Fund	5216876	2021-12-30
5	Delaware Group Equity Funds V-Small Cap Value ...	4730700	2022-02-27
6	Vanguard Small-Cap Index Fund	4623428	2021-12-30
7	Allspring Special Small Cap Value Fund	4289210	2022-02-27
8	iShares Russell 2000 ETF	4243742	2022-01-30
9	iShares S&P Smallcap 600 Value ETF	3577320	2022-01-30

% Out	Value
0 0.0700	150699929
1 0.0558	174072380
2 0.0318	58163851
3 0.0245	76363372
4 0.0241	44082602
5 0.0219	68264001
6 0.0214	39067966
7 0.0198	61893300
8 0.0196	42267670
9 0.0165	35630107]

['options', ('2022-08-19', '2023-01-20')]

symbol: LPI

sector: Energy

Index: SP600

vol_30d_2yr: 14333690.68359375

Sector 1YMF: -29.169998168945312

1YMF: -29.169998168945312

risk trend factor: -0.4368728166685758

beta	currentRatio	debtToEquity	ebitda	ebitdaMargins	forwardPE
LPI 3.87549	0.448	280.154	404096000	0.28987	3.858025

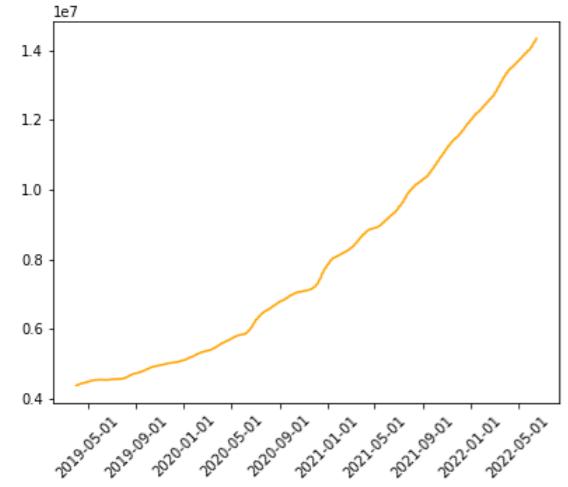
freeCashflow grossMargins grossProfits heldPercentInstitutions \

```
LPI -657876864 0.65925 919042000 0.65067
LPI industry marketCap operatingCashflow operatingMargins payoutRatio \
LPI Oil & Gas E&P 1493677440 496671008 0.13235 0
LPI pegRatio priceToBook priceToSalesTrailing12Months profitMargins \
LPI -0.22 6.160236 1.071447 0.10402
LPI quickRatio returnOnAssets returnOnEquity revenueGrowth revenuePerShare \
LPI 0.396 0.05774 0.58906 1.5 97.899
LPI sector sharesOutstanding shortRatio totalCash totalCashPerShare \
LPI Energy 17070600 1.76 56798000 3.35
LPI totalDebt totalRevenue
LPI 1439378048 1394075008
Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDDev 90d_lower 90d_upper
2022-06-17 81.470001 55.385982 91.38381 127.381638 80.369841 15.040964 50.287912 110.45177
```

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst	
LPI	1.480449	81.470001	14333690.683594	0.651878	0.115073	0.409738

	I axis	r axis
blue	symbol	magenta
green	trailing_1yr_max	cyan
red	trailing_1yr_min	
orange	30d_vol_2yr	
black	risk_trend_factor/linear	
yellow	supply_trend_1yr	

Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592

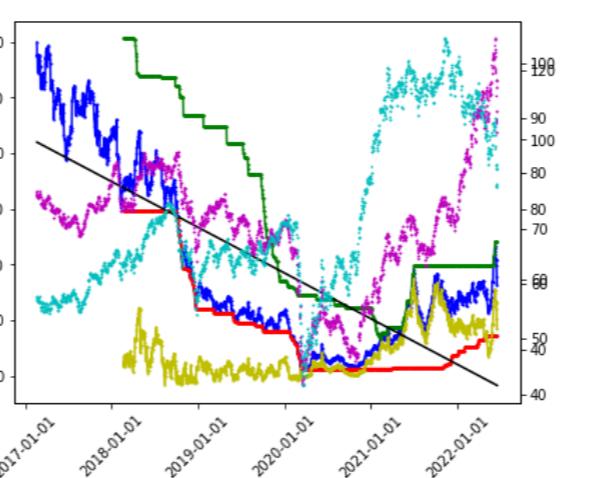
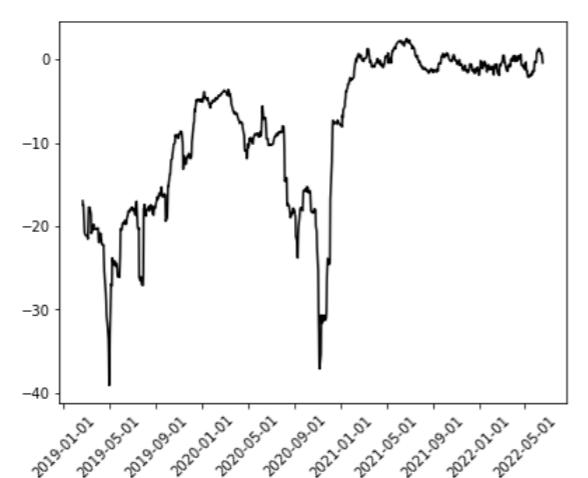


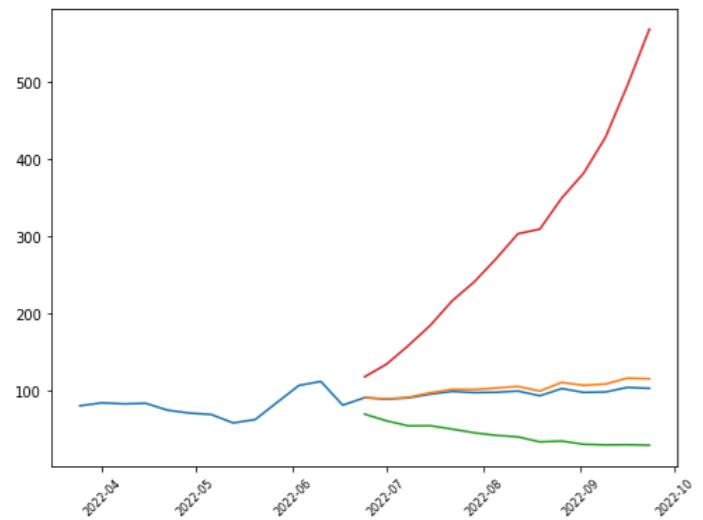
ets next 13 weeks

2022-06-17

2022-06-28

```
inner cv scores:
best model: ['add', 'mul', True]
best inner cv score, sdev (11 folds): 231.24825495811749 166.92299399352999
test cv mean error, stdev (10 folds): 246.78009886419335 167.32004915040773
sell date: 2022-09-16
expected return: 0.2824491084142967
discounted return: 0.0028635359679796135
quarter return: 1.3009162644691843
```





```
[{'quarterly_balance_sheet', 2021-12-31 2021-09-30 2021-06-30 \
    Capital Surplus 2.788628e+09 2.715196e+09 2.473709e+09
    Total Liab 2.038044e+09 2.034910e+09 1.941088e+09
    Total Stockholder Equity 5.137800e+08 2.240620e+08 -1.542820e+08
    Deferred Long Term Liab 8.100000e+06 3.630000e+07 3.200000e+06
    Other Current Liab 3.529620e+08 4.316830e+08 4.279700e+08
    Total Assets 2.551824e+09 2.258972e+09 1.786806e+09
    Common Stock 1.710000e+05 1.610000e+05 1.360000e+05
    Other Current Assets 4.346000e+06 2.049400e+07 1.866500e+07
    Retained Earnings -2.275019e+09 -2.491295e+09 -2.628127e+09
    Other Liab 7.954700e+07 1.041390e+08 1.387280e+08
    Other Assets 5.430400e+07 8.209600e+07 9.670500e+07
    Cash 5.679800e+07 5.139600e+07 1.935430e+08
    Total Current Liabilities 5.269130e+08 5.748110e+08 4.896750e+08
    Short Long Term Debt 5.200000e+04 1.310000e+05 1.790000e+05
    Property Plant Equipment 2.261663e+09 1.982329e+09 1.387284e+09
    Total Current Assets 2.358570e+08 1.945470e+08 3.028170e+08
    Net Tangible Assets 5.137800e+08 2.240620e+08 -1.542820e+08
    Net Receivables 1.518070e+08 1.226570e+08 9.060900e+07
    Long Term Debt 1.425858e+09 1.349896e+09 1.306112e+09
    Inventory 1.016000e+07 NaN NaN
    Accounts Payable 6.668600e+07 5.724100e+07 4.638300e+07
    Deferred Long Term Asset Charges NaN 2.200000e+06 3.600000e+06

    2021-03-31
    Capital Surplus 2.426769e+09
    Total Liab 1.543471e+09
    Total Stockholder Equity -6.856800e+07
    Deferred Long Term Liab 2.100000e+06
    Other Current Liab 1.927360e+08
    Total Assets 1.474903e+09
    Common Stock 1.290000e+05
    Other Current Assets 2.612300e+07
    Retained Earnings -2.495466e+09
    Other Liab 9.939500e+07
    Other Assets 1.848700e+07
    Cash 4.426200e+07
    Total Current Liabilities 2.922430e+08
    Short Long Term Debt NaN
    Property Plant Equipment 1.318327e+09
    Total Current Assets 1.380890e+08
    Net Tangible Assets -6.856800e+07
    Net Receivables 6.770400e+07
    Long Term Debt 1.145374e+09
    Inventory NaN
    Accounts Payable 4.466500e+07
    Deferred Long Term Asset Charges 2.200000e+06 ]]

[{'quarterly_cashflow', 2021-12-31 2021-09-30 \
    Change To Liabilities 10045000.0 11558000.0
    Total Cashflows From Investing Activities -279061000.0 -349183000.0
    Net Borrowings 75000000.0 50000000.0
    Total Cash From Financing Activities 74904000.0 36180000.0
    Change To Operating Activities 62018000.0 633000.0
    Net Income 216276000.0 136832000.0
    Change In Cash 5402000.0 -213588000.0
    Repurchase Of Stock -180000.0 -848000.0
    Total Cash From Operating Activities 209559000.0 99415000.0
    Depreciation 7932000.0 67727000.0
    Change To Account Receivables -2915000.0 -32048000.0
    Other Cashflows From Financing Activities 84000.0 -13145000.0
    Change To Netincome -130488000.0 -86796000.0
    Capital Expenditures -279061000.0 -742618000.0
    Issuance Of Stock NaN 173000.0

    2021-06-30 2021-03-31
    Change To Liabilities 719000.0 9065000.0
    Total Cashflows From Investing Activities -99547000.0 -69020000.0
    Net Borrowings 160000000.0 -35000000.0
    Total Cash From Financing Activities 203723000.0 -6626000.0
    Change To Operating Activities 65178000.0 -25871000.0
    Net Income -132661000.0 -75439000.0
    Change In Cash 220722000.0 -4495000.0
    Repurchase Of Stock -451000.0 -1290000.0
    Total Cash From Operating Activities 116546000.0 71151000.0
    Depreciation 43901000.0 42249000.0
    Change To Account Receivables -22905000.0 -3728000.0
    Other Cashflows From Financing Activities -1452000.0 2798000.0
    Change To Netincome 161204000.0 123886000.0
    Capital Expenditures -99665000.0 -69209000.0
    Issuance Of Stock 45626000.0 26866000.0 ]]

[{'quarterly_earnings', Revenue Earnings
    Quarter
    1Q2021 250230000 -75439000
    2Q2021 294371000 -132661000
    3Q2021 379250000 136832000
    4Q2021 470224000 216276000}]
```

```
[ 'quarterly_financials',
Research Development None None None
Effect Of Accounting Charges None None None
Income Before Tax 219328000.0 139509000.0 -133983000.0
Minority Interest None None None
Net Income 216276000.0 136832000.0 -132661000.0
Selling General Administrative 13619000.0 15008000.0 21101000.0
Gross Profit 331794000.0 249997000.0 182123000.0
Ebit 258808000.0 74290000.0 -97024000.0
Operating Income 258808000.0 74290000.0 -97024000.0
Other Operating Expenses -15225000.0 98021000.0 218070000.0
Interest Expense -31150000.0 -30423000.0 -25900000.0
Extraordinary Items None None None
Non Recurring None None None
Other Items None None None
Income Tax Expense 3052000.0 2677000.0 -1322000.0
Total Revenue 470224000.0 379250000.0 294371000.0
Total Operating Expenses 211416000.0 384960000.0 391395000.0
Cost Of Revenue 138430000.0 129253000.0 112248000.0
Total Other Income Expense Net -39480000.0 65219000.0 -36959000.0
Discontinued Operations None None None
Net Income From Continuing Ops 216276000.0 136832000.0 -132661000.0
Net Income Applicable To Common Shares 216276000.0 136832000.0 -132661000.0
```

2021-03-31

```
Research Development None
Effect Of Accounting Charges None
Income Before Tax -76201000.0
Minority Interest None
Net Income -75439000.0
Selling General Administrative 13073000.0
Gross Profit 155128000.0
Ebit -51566000.0
Operating Income -51566000.0
Other Operating Expenses 155512000.0
Interest Expense -25942000.0
Extraordinary Items None
Non Recurring None
Other Items None
Income Tax Expense -762000.0
Total Revenue 250230000.0
Total Operating Expenses 301796000.0
Cost Of Revenue 95102000.0
Total Other Income Expense Net -24635000.0
Discontinued Operations None
Net Income From Continuing Ops -75439000.0
Net Income Applicable To Common Shares -75439000.0 ]
```

```
[ 'mutualfund_holders',
0 SPDR (R) Ser Tr-SPDR (R) S&P (R) Oil & Gas Exp... 1283155 2022-01-30
1 iShares Core S&P Smallcap ETF 1007152 2022-01-30
2 Vanguard Total Stock Market Index Fund 437939 2021-12-30
3 iShares Russell 2000 ETF 291546 2022-01-30
4 Vanguard Extended Market Index Fund 182706 2021-12-30
5 Direxion Shares ETF Tr- Daily S&P Oil & Gas Ex... 147088 2022-01-30
6 Fidelity Strategic Advisors Small-Mid Cap Fund 139883 2022-02-27
7 Vanguard Tax Managed Fund-Small Cap Fund 120804 2021-12-30
8 DFA U.S. Small Cap Series 118021 2022-01-30
9 First Tr Exchange Traded Fd-First Tr Natural G... 117256 2022-02-27
```

	% Out	Value
0	0.0742	86176689
1	0.0582	67640328
2	0.0253	26333272
3	0.0168	19580229
4	0.0106	10986111
5	0.0085	9878430
6	0.0081	10709442
7	0.0070	7263944
8	0.0068	7926290
9	0.0068	8977119]

```
[ 'options', ('2022-07-15', '2022-12-16', '2023-01-20')]
```

```
symbol: NTCT
sector: Technology
Index: SP600
```

```
vol_30d_2yr: 9623952.1484375
Sector 1YMF: -3.339996337890625
1YMF: -3.339996337890625
```

```
risk trend factor: -0.45135087973882726
```

```
beta currentRatio debtToEquity ebitda ebitdaMargins forwardPE \
```

```
NTCT 0.644642 1.936 20.158 145480992 0.17004 15.90411
```

```
freeCashflow grossMargins grossProfits heldPercentInstitutions \
```

```
NTCT 260617744 0.74966 641389000 0.96181
```

```
industry marketCap operatingCashflow operatingMargins \
```

```
NTCT Software-Infrastructure 2581519360 296012992 0.05813
```

```

payoutRatio pegRatio priceToBook priceToSalesTrailing12Months \
NTCT          0      9.69    1.252652            3.017292

profitMargins quickRatio returnOnAssets returnOnEquity revenueGrowth \
NTCT      0.04193     1.788      0.0099      0.01764      -0.104

revenuePerShare sector sharesOutstanding shortRatio totalCash \
NTCT      11.559   Technology    74117696      5.93  703198016

totalCashPerShare totalDebt totalRevenue trailingPE
NTCT      9.488  415337984  855574976  72.56251

Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper
2022-06-17    32.93 32.684032 35.016032 37.348031 33.294127 1.677396 29.939335 36.648919

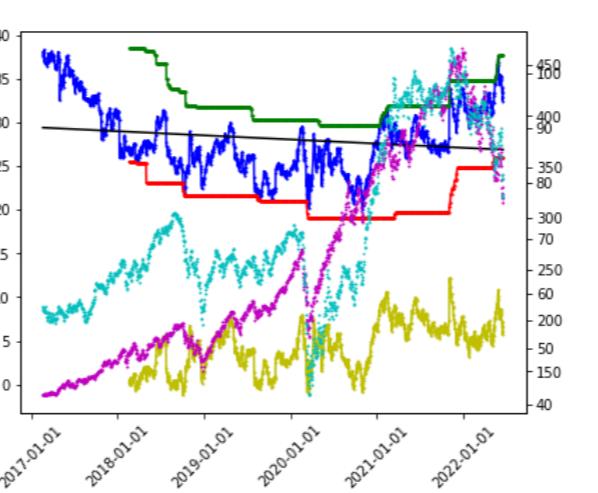
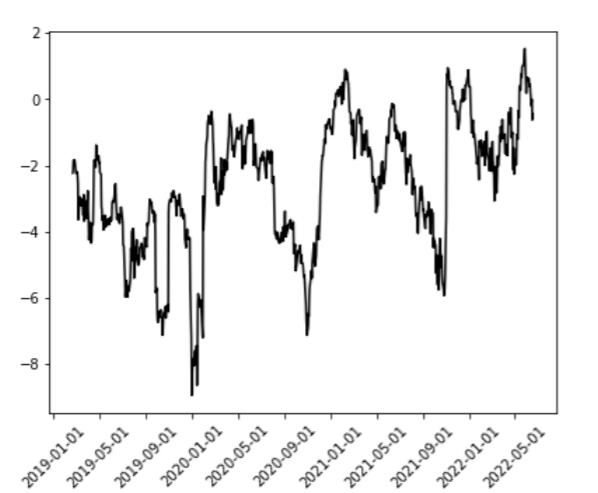
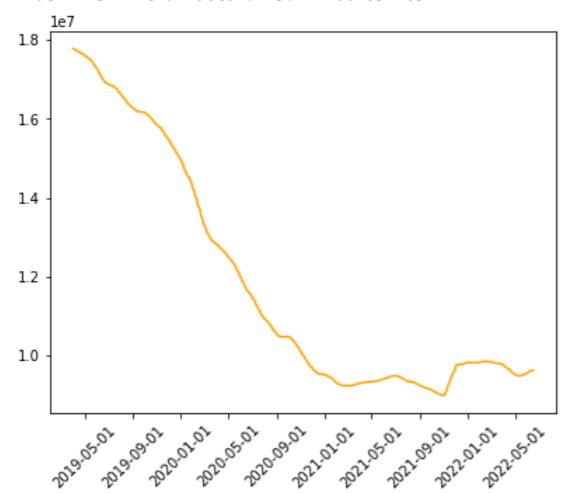
volume_factor latest_p vol_30d_2yr pct_2yr adf hurst
NTCT    1.227115    32.93 9623952.148438 0.734933 0.034064 0.345791

```

ADFuller H0 rejected @ .05, Mean Reverting TS
Month Mean Reverting buy signal

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Sector 1YMF: -363.4599914550781
Sector Volume Factor: 1.1528457613891094
Sector Risk Trend Factor: -4.954471974241429
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592

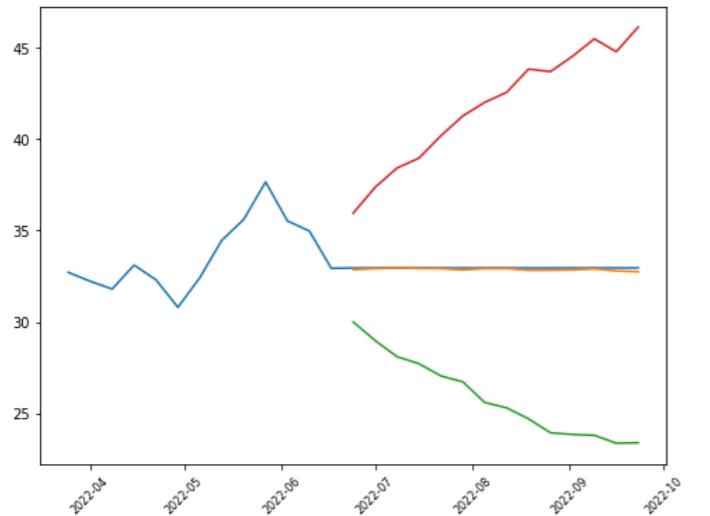


ets next 13 weeks

```

2022-06-17
2022-06-28
inner cv scores:
best model: [None, 'mul', True]
best inner cv score, sdev (11 folds): 10.19920331942748 5.86648363530566
test cv mean error, stdev (10 folds): 10.486504097853375 6.078588217707644
sell date: 2022-09-23
expected return: 0.000778332625554844
discounted return: 8.276947889962472e-06
quarter return: 1.0007617660510266

```



```
['options', ('2022-12-16',)]
symbol: BMY
sector: Healthcare
Index: SP500
vol_30d_2yr: 251915320.8984375
Sector 1YMF: -3.2500076293945312
1YMF: -3.2500076293945312
risk trend factor: -0.4710154943017281
    beta currentRatio debtToEquity dividendRate dividendYield \
BMY 0.479582      1.32     145.347      2.16      0.0293

earningsGrowth      ebitda ebitdaMargins forwardPE freeCashflow \
BMY      -0.337 21088999424      0.44908 9.475837 14867624960

grossMargins grossProfits heldPercentInstitutions \
BMY      0.80128 37048000000      0.79264

industry      marketCap operatingCashflow \
BMY Drug Manufacturers-General 162809217024      16195000320

operatingMargins payoutRatio pegRatio priceToBook \
BMY      0.22193      0.7305      2.12      5.155397

priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
BMY      3.466976      0.13311      1.152      0.06046

returnOnEquity revenueGrowth revenuePerShare      sector \
BMY      0.18085      0.052      21.36  Healthcare

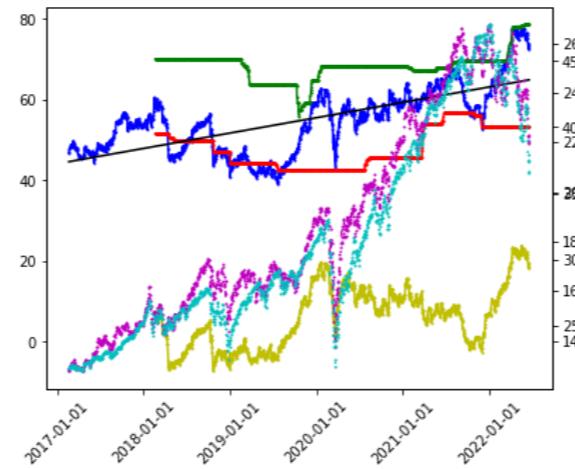
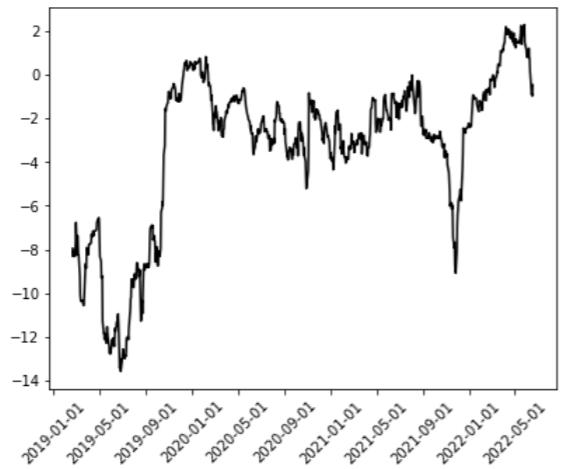
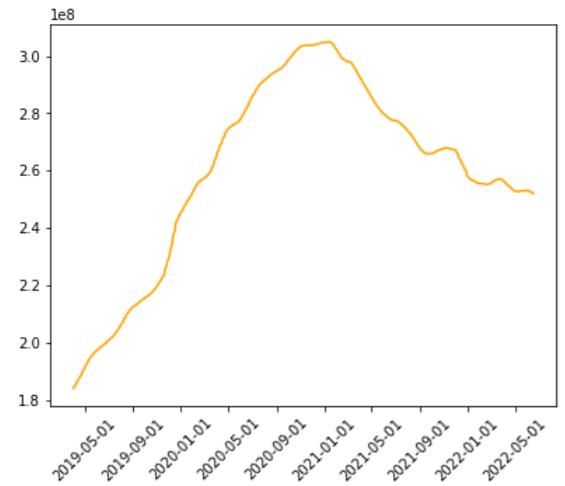
sharesOutstanding shortRatio      totalCash totalCashPerShare      totalDebt \
BMY      2129059968      2.09  15196000256      7.137 45994999808

totalRevenue trailingPE
BMY 46960001024 27.088205

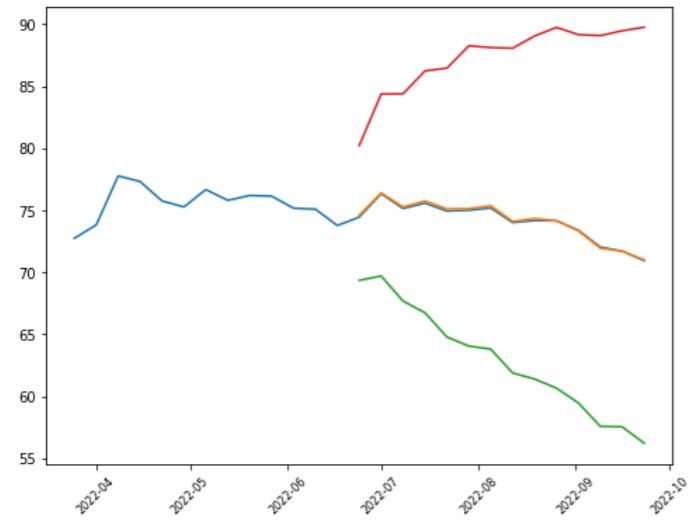
Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper
2022-06-17 73.769997 72.385736 75.350794 78.315851 75.335854 1.870668 71.594519 79.07719
```

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst	
BMY	1.240092	73.769997	251915320.898438	0.809374	0.661274	0.479207

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		
Sector 1YMF:	-122.20997619628906		
Sector Volume Factor:	1.2238851152317325		
Sector Risk Trend Factor:	-3.3236323632363236		
Index 1YMF:	-287.8400573738469		
Index Volume Factor:	1.1835166983613057		
Index Risk Trend Factor:	-3.791860877423899		



ets next 13 weeks
 2022-06-17
 2022-06-28
 inner cv scores:
 best model: ['mul', 'add', True]
 best inner cv score, sdev (11 folds): 85.70486346664019 123.53223464005858
 test cv mean error, stdev (10 folds): 80.96954788091688 128.6062683894323
 sell date: 2022-07-01
 expected return: 0.03479204005754661
 discounted return: 0.0034259029415752984
 quarter return: 1.369772143291564



```

['options', ('2023-01-20', '2024-01-19')]
['sustainability', Value
2022-5
palmoil False
controversialWeapons False
gambling False
socialScore 14.93
nuclear False
furLeather False
alcoholic False
gmo False
catholic True
socialPercentile None
peerCount 83
governanceScore 7.56
environmentPercentile None
animalTesting True
tobacco False
totalEsg 22.83
highestControversy 2
esgPerformance AVG_PERF
coal False
pesticides False
adult False
percentile 34.61
peerGroup Pharmaceuticals
smallArms False
environmentScore 0.34
governancePercentile None
militaryContract False]
symbol: PSX
sector: Energy
Index: SP500
vol_30d_2yr: 72319717.1875
Sector 1YMF: -15.809989929199219
1YMF: -15.809989929199219
risk trend factor: -0.4763479592118208
    currentRatio debtToEquity dividendRate dividendYield      ebitda \
PSX      1.128       65.25       3.88       0.041  3537999872

    ebitdaMargins forwardPE freeCashflow grossMargins grossProfits \
PSX      0.02802   13.930335   2430874880      0.08505  93740000000

    heldPercentInstitutions           industry      marketCap \
PSX      0.68375  Oil & Gas Refining & Marketing  42058629120

    operatingCashflow operatingMargins payoutRatio pegRatio priceToBook \
PSX      6881999872      0.01601      0.633     1.22   2.318134

    priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
PSX      0.333082      0.02022      0.783      0.02175

    returnOnEquity revenueGrowth revenuePerShare sector sharesOutstanding \
PSX      0.13575       0.697      285.373  Energy        438201984

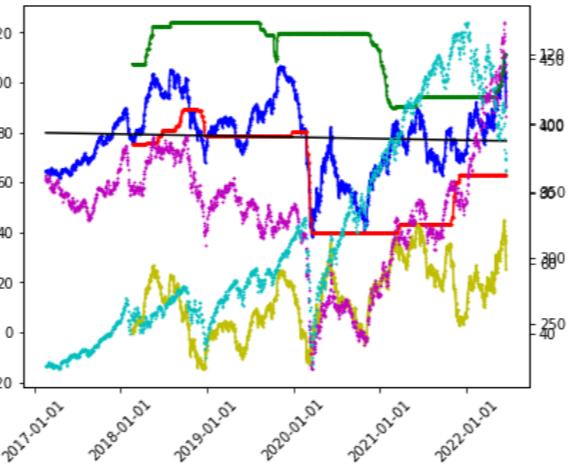
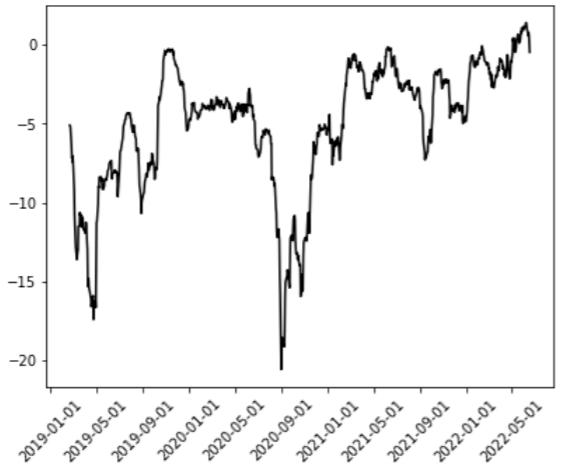
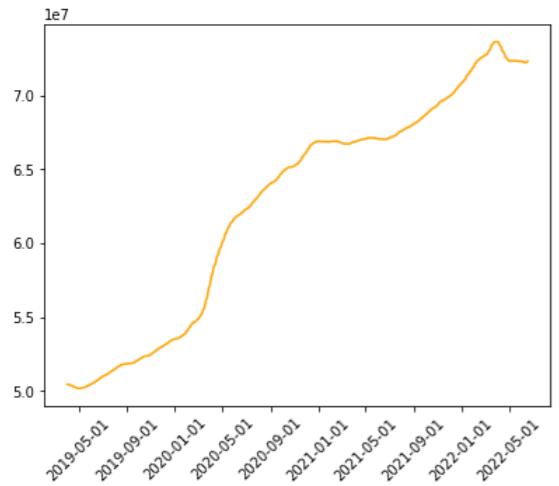
    shortRatio totalCash totalCashPerShare      totalDebt totalRevenue
PSX      2.5  3335000064      6.932  14433999872  126270996480
Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper
2022-06-17 90.510002 91.355788 101.374286 111.392784 91.798413 8.517034 74.764345 108.832481

```

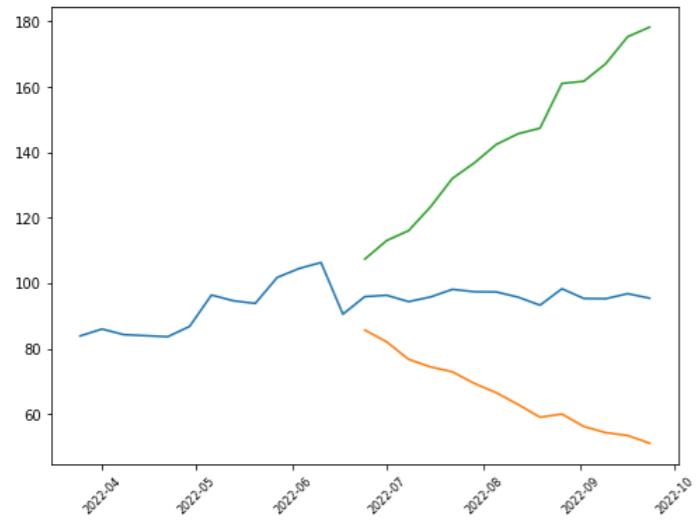
	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
PSX	1.286747	90.510002	72319717.1875	0.694604	0.093536	0.512375

	l axis	r axis
blue	symbol	magenta sector
green	trailing_1yr_max	cyan index
red	trailing_1yr_min	
orange	30d_vol_2yr	
black	risk_trend_factor/linear	
yellow	supply_trend_1yr	

Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -287.8400573730469
Index Volume Factor: 1.1835166983613057
Index Risk Trend Factor: -3.791860877423899



ets next 13 weeks
 2022-06-17
 2022-06-28
 inner cv scores:
 best model: ['add', 'add', True]
 best inner cv score, sdev (11 folds): 283.11205084852804 353.85725930998063
 test cv mean error, stdev (10 folds): 311.5712358052859 359.5052187027191
 sell date: 2022-08-26
 expected return: 0.08579824571808381
 discounted return: 0.0012479815184585075
 quarter return: 1.1215848348237154



```
[ 'quarterly_balance_sheet', 2022-03-31 2021-12-31 2021-09-30 \
Intangible Assets 8.190000e+08 8.130000e+08 8.220000e+08
Capital Surplus 1.966700e+10 2.050400e+10 2.048800e+10
Total Liab 3.851700e+10 3.395700e+10 3.581000e+10
Total Stockholder Equity 2.181500e+10 1.916600e+10 1.813900e+10
Minority Interest 3.060000e+08 2.471000e+09 2.458000e+09
Other Current Liab 1.467000e+09 1.406000e+09 1.346000e+09
Total Assets 6.063800e+10 5.559400e+10 5.640700e+10
Common Stock 7.000000e+06 7.000000e+06 6.000000e+06
Other Current Assets 2.020000e+08 9.900000e+07 3.200000e+07
Retained Earnings 1.639100e+10 1.621600e+10 1.535000e+10
Other Liab 7.031000e+09 7.472000e+09 7.239000e+09
Good Will 1.484000e+09 1.484000e+09 1.425000e+09
Treasury Stock -1.425000e+10 -1.756100e+10 -1.770500e+10
Other Assets 1.833000e+09 1.603000e+09 1.857000e+09
Cash 3.335000e+09 3.147000e+09 2.897000e+09
Total Current Liabilities 1.760300e+10 1.280100e+10 1.392100e+10
Short Long Term Debt 1.474000e+09 1.456000e+09 1.489000e+09
Other Stockholder Equity -5.140000e+08 -4.450000e+08 -5.890000e+08
Property Plant Equipment 2.233300e+10 2.348500e+10 2.237700e+10
Total Current Assets 1.985400e+10 1.469700e+10 1.601900e+10
Long Term Investments 1.431500e+10 1.351200e+10 1.390700e+10
Net Tangible Assets 1.951200e+10 1.686900e+10 1.589200e+10
Net Receivables 1.045500e+10 7.470000e+09 8.006000e+09
Long Term Debt 1.296000e+10 1.270200e+10 1.342100e+10
Inventory 4.530000e+09 3.394000e+09 4.400000e+09
Accounts Payable 1.318400e+10 8.461000e+09 9.215000e+09

2021-06-30
Intangible Assets 8.250000e+08
Capital Surplus 2.046300e+10
Total Liab 3.637500e+10
Total Stockholder Equity 1.814900e+10
Minority Interest 2.453000e+09
Other Current Liab 1.393000e+09
Total Assets 5.697700e+10
Common Stock 6.000000e+06
Other Current Assets 1.800000e+07
Retained Earnings 1.534500e+10
Other Liab 7.722000e+09
Good Will 1.425000e+09
Treasury Stock -1.766500e+10
Other Assets 1.894000e+09
Cash 2.207000e+09
Total Current Liabilities 1.455100e+10
Short Long Term Debt 2.489000e+09
Other Stockholder Equity -5.490000e+08
Property Plant Equipment 2.368800e+10
Total Current Assets 1.578000e+10
Long Term Investments 1.336500e+10
Net Tangible Assets 1.589900e+10
Net Receivables 8.062000e+09
Long Term Debt 1.292400e+10
Inventory 4.752000e+09
Accounts Payable 8.945000e+09 ]

[ 'quarterly_cashflow', 2022-03-31 2021-12-31 \
Investments 1.500000e+07 3.100000e+07
Change To Liabilities 4.809000e+09 -7.980000e+08
Total Cashflows From Investing Activities -4.280000e+08 -5.570000e+08
Net Borrowings -2.400000e+07 -4.760000e+08
Total Cash From Financing Activities -5.120000e+08 -9.780000e+08
Change To Operating Activities -8.490000e+08 3.000000e+07
Issuance Of Stock 2.300000e+07 2.000000e+06
Net Income 5.820000e+08 1.273000e+09
Change In Cash 1.880000e+08 2.500000e+08
Effect Of Exchange Rate -8.000000e+06 -1.500000e+07
Total Cash From Operating Activities 1.136000e+09 1.800000e+09
Depreciation 3.380000e+08 4.540000e+08
Other Cashflows From Investing Activities -7.400000e+07 8.000000e+06
Dividends Paid -4.040000e+08 -4.030000e+08
Change To Inventory -1.152000e+09 1.006000e+09
Change To Account Receivables -3.042000e+09 5.430000e+08
Other Cashflows From Financing Activities -1.070000e+08 -1.010000e+08
Change To Netincome 3.310000e+08 -3.390000e+08
Capital Expenditures -3.700000e+08 -5.970000e+08

2021-09-30 2021-06-30
Investments 7.800000e+07 1.000000e+08
Change To Liabilities 2.410000e+08 7.030000e+08
Total Cashflows From Investing Activities -4.960000e+08 -3.520000e+08
Net Borrowings -5.210000e+08 -3.900000e+07
Total Cash From Financing Activities -1.005000e+08 -5.420000e+08
Change To Operating Activities 4.400000e+07 -1.300000e+08
Issuance Of Stock 2.000000e+06 4.000000e+06
Net Income 4.020000e+08 2.960000e+08
Change In Cash 6.900000e+08 8.560000e+08
```

	Revenue	Earnings
Quarter		
2Q2021	27035000000	296000000
3Q2021	30246000000	402000000
4Q2021	32554000000	1273000000
1Q2022	36011000000	582000000]

	2022-03-31	2021-12-31	\
Research Development	None	None	
Effect Of Accounting Charges	None	None	
Income Before Tax	828000000.0	1627000000.0	
Minority Interest	306000000.0	2471000000.0	
Net Income	582000000.0	1273000000.0	
Selling General Administrative	1773000000.0	1905000000.0	
Gross Profit	2516000000.0	3264000000.0	
Ebit	275000000.0	921000000.0	
Operating Income	275000000.0	921000000.0	
Other Operating Expenses	130000000.0	69000000.0	
Interest Expense	-135000000.0	-141000000.0	
Extraordinary Items	None	None	
Non Recurring	None	None	
Other Items	None	None	
Income Tax Expense	171000000.0	256000000.0	
Total Revenue	36011000000.0	32554000000.0	
Total Operating Expenses	35736000000.0	31633000000.0	
Cost Of Revenue	33495000000.0	29290000000.0	
Total Other Income Expense Net	553000000.0	706000000.0	
Discontinued Operations	None	None	
Net Income From Continuing Ops	657000000.0	1371000000.0	
Net Income Applicable To Common Shares	580000000.0	1271000000.0	

	2021-09-30	2021-06-30	
Research Development	None	None	
Effect Of Accounting Charges	None	None	
Income Before Tax	448000000.0	436000000.0	
Minority Interest	2458000000.0	2453000000.0	
Net Income	402000000.0	296000000.0	
Selling General Administrative	1590000000.0	1608000000.0	
Gross Profit	2717000000.0	1817000000.0	
Ebit	686000000.0	-262000000.0	
Operating Income	686000000.0	-262000000.0	
Other Operating Expenses	80000000.0	107000000.0	
Interest Expense	-151000000.0	-143000000.0	
Extraordinary Items	None	None	
Non Recurring	None	None	
Other Items	None	None	
Income Tax Expense	-40000000.0	62000000.0	
Total Revenue	30246000000.0	27035000000.0	
Total Operating Expenses	29560000000.0	27297000000.0	
Cost Of Revenue	27529000000.0	25218000000.0	
Total Other Income Expense Net	-238000000.0	698000000.0	
Discontinued Operations	None	None	
Net Income From Continuing Ops	488000000.0	374000000.0	
Net Income Applicable To Common Shares	400000000.0	291000000.0]

	Holder	Shares	Date Reported	\
0	Select Sector SPDR Fund-Energy Select	12885545	2022-01-30	
1	Vanguard Total Stock Market Index Fund	12454940	2021-12-30	
2	Vanguard 500 Index Fund	9279357	2021-12-30	
3	Vanguard Mid-Cap Index Fund	4953997	2021-12-30	
4	SPDR S&P 500 ETF Trust	4644780	2022-01-30	
5	Fidelity 500 Index Fund	4487208	2022-02-27	
6	iShares Core S&P 500 ETF	3644889	2022-01-30	
7	Vanguard Index-Value Index Fund	3348114	2021-12-30	
8	Vanguard Institutional Index Fund-Institutional...	3301601	2021-12-30	
9	Vanguard Energy Index Fund	2553262	2022-02-27	

% Out	Value
0.0268	1092565360
0.0259	902484952
0.0193	672382208
0.0183	358966622
0.0097	393830896
0.0093	378002401
0.0076	309050138
0.0070	242604340
0.0069	239234008
0.0053	215086790

```

['sustainability',
2022-5
palmOil False
controversialWeapons False
gambling False
socialScore 7
nuclear False
furLeather False
alcoholic False
gmo False
catholic False
socialPercentile 0
peerCount 39
governanceScore 5.96
environmentPercentile 0
animalTesting False
tobacco False
totalEsg 29.35
highestControversy 3
esgPerformance None
coal False
pesticides False
adult False
percentile 59.45
peerGroup Refiners & Pipelines
smallArms False
environmentScore 16.39
governancePercentile 0
militaryContract False]
symbol: NOC
sector: Industrials
Index: SP500
vol_30d_2yr: 18840431.25
Sector 1YMF: -28.880035400390625
1YMF: -28.880035400390625
risk trend factor: -0.4783048635578619
    beta currentRatio debtToEquity dividendRate dividendYield \
NOC 0.70372 1.306 109.076 6.92 0.0156

earningsGrowth ebitda ebitdaMargins forwardPE freeCashflow \
NOC -0.546 8807000064 0.24944 16.994137 4150625024

grossMargins grossProfits heldPercentInstitutions industry \
NOC 0.20962 7268000000 0.83975 Aerospace & Defense

marketCap operatingCashflow operatingMargins payoutRatio pegRatio \
NOC 72090722304 3144999936 0.21409 0.1734 3.06

priceToBook priceToSalesTrailing12Months profitMargins quickRatio \
NOC 5.430435 2.041825 0.16328 1.131

returnOnAssets returnOnEquity revenueGrowth revenuePerShare sector \
NOC 0.11339 0.48421 -0.039 222.722 Industrials

sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
NOC 155444992 2.46 2174000128 13.986 14492999680

totalRevenue trailingPE
NOC 35306999808 12.804959

```

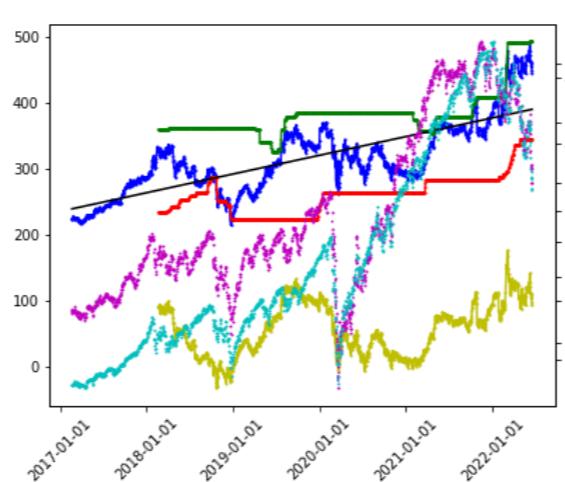
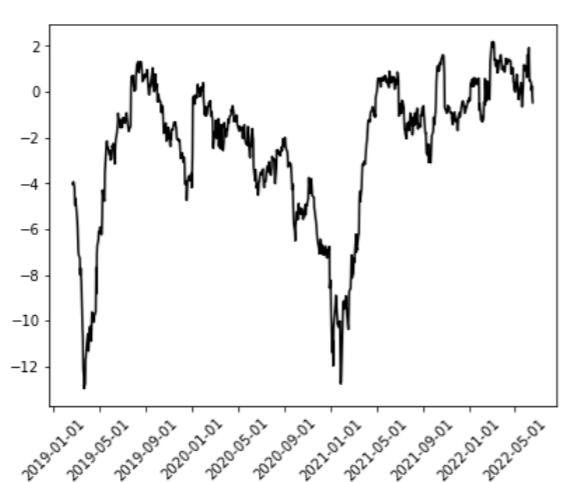
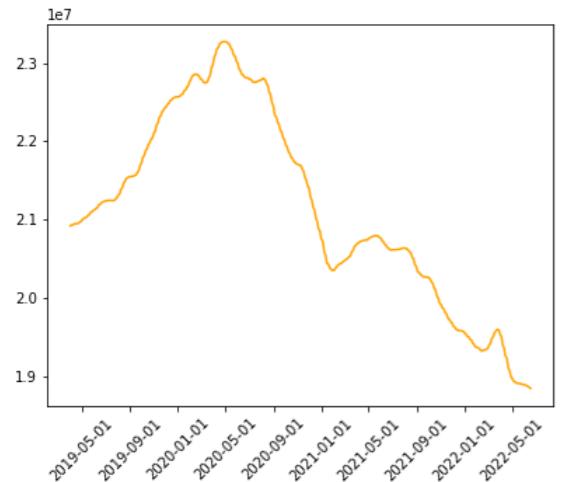
	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSD	90d_lower	90d_upper
2022-06-17	443.929993	440.378773	462.968095	485.557416	457.224603	10.945286	435.33403	479.115175

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst	
NOC	0.996341	443.929993	18840431.25	0.769029	0.762454	0.423677

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

6/22/22, 7:59 AM

Sector 1YMF: -141.5800018310547
Sector Volume Factor: 0.8696853533786545
Sector Risk Trend Factor: -4.514668337867341
Index 1YMF: -287.8400573738469
Index Volume Factor: 1.1835166983613057
Index Risk Trend Factor: -3.791860877423899



ets next 13 weeks

2022-06-17

2022-06-28

inner cv scores:

best model: ['add', 'add', False]

best inner cv score, sdev (11 folds): 1037.1046011429494 887.0594955150838

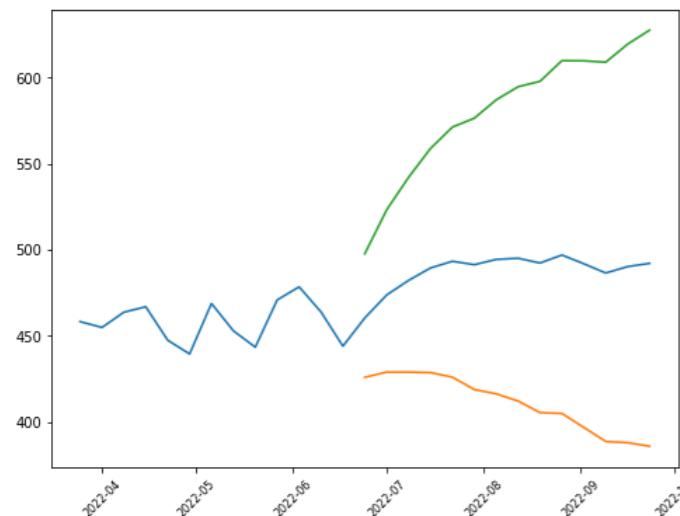
test cv mean error, stdev (10 folds): 1104.5425839112577 903.070108301302

sell date: 2022-08-26

expected return: 0.11919198458068472

discounted return: 0.0017076227331112026

quarter return: 1.1699573662974765



```

['options', ('2022-08-19', '2023-01-20', '2024-01-19')]
['sustainability',                                     Value
2022-5
palmoil          False
controversialWeapons  True
gambling          False
socialScore        15.7
nuclear           False
furLeather        False
alcoholic         False
gmo               False
catholic          False
socialPercentile None
peerCount         22
governanceScore   5.32
environmentPercentile None
animalTesting     False
tobacco           False
totalEsg          28.49
highestControversy 3
esgPerformance    AVG_PERF
coal              False
pesticides        False
adult             False
percentile        56.08
peerGroup          Aerospace & Defense
smallArms          True
environmentScore   7.47
governancePercentile None
militaryContract  True]
symbol: SNEX
sector: Financial Services
Index: SP600
vol_30d_2yr: 1444321.875
Sector 1YMF: -6.769996643066406
1YMF: -6.769996643066406
risk trend factor: -0.48253696013085795
  beta currentRatio debtToEquity earningsGrowth ebitdaMargins \
SNEX 1.072058      1.096     865.897      1.082      0.0

  forwardPE grossMargins grossProfits heldPercentInstitutions \
SNEX 10.409091      0.0238    1077400000      0.76698

  industry marketCap operatingCashflow operatingMargins \
SNEX Capital Markets 1461767424      1641299968      0.00389

  payoutRatio pegRatio priceToBook priceToSalesTrailing12Months \
SNEX      0.0      0.48     1.606982      0.030757

  profitMargins quickRatio returnOnAssets returnOnEquity revenueGrowth \
SNEX      0.00291     1.066     0.00834      0.15806      0.551

  revenuePerShare      sector sharesOutstanding shortRatio \
SNEX 2470.063 Financial Services 19947700      3.08

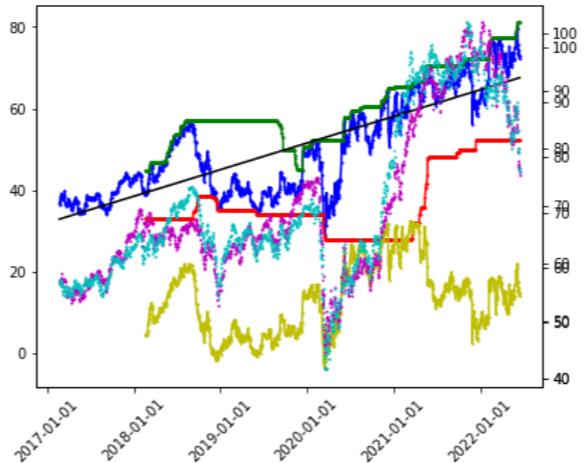
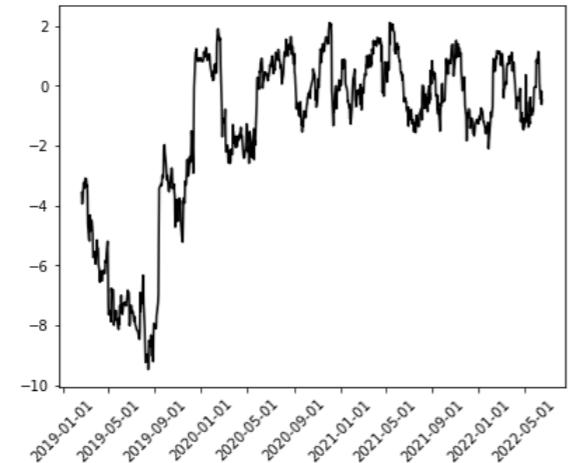
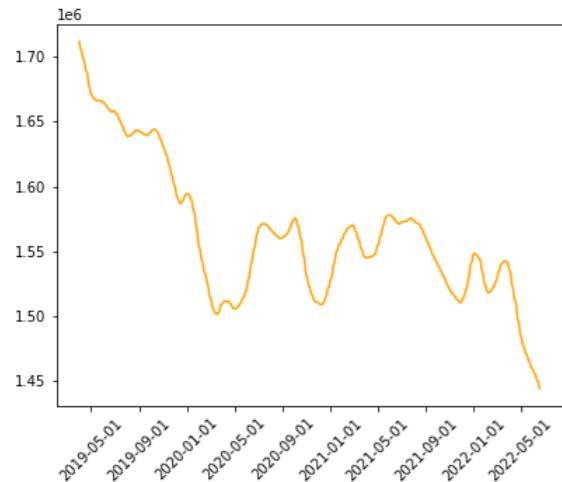
  totalCash totalCashPerShare totalDebt totalRevenue trailingPE
SNEX 11907500032      591.46    8252000256 47527100416 12.766551
  Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper
2022-06-17 72.900002 69.379346 74.933492 80.487639 73.35127 3.022209 67.306851 79.395688

```

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
SNEX	1.141643	72.900002	1444321.875	0.751221	0.686282	0.374695

	l axis	r axis
blue	legend	legend
green	symbol	sector
red	trailing_1yr_max	trailing_1yr_min
orange	30d_vol_2yr	
black	risk_trend_factor/linear	
yellow	supply_trend_1yr	

Sector 1YMF: -72.2699966430664
Sector Volume Factor: 1.2707168073107045
Sector Risk Trend Factor: -4.617890709055871
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592



```

inner cv scores:  

best model: ['add', 'add', True]  

best inner cv score, sdev (11 folds): 60.19721553812694 70.39144047102478  

test cv mean error, stdev (10 folds): 63.77710305465015 72.86619089498309  

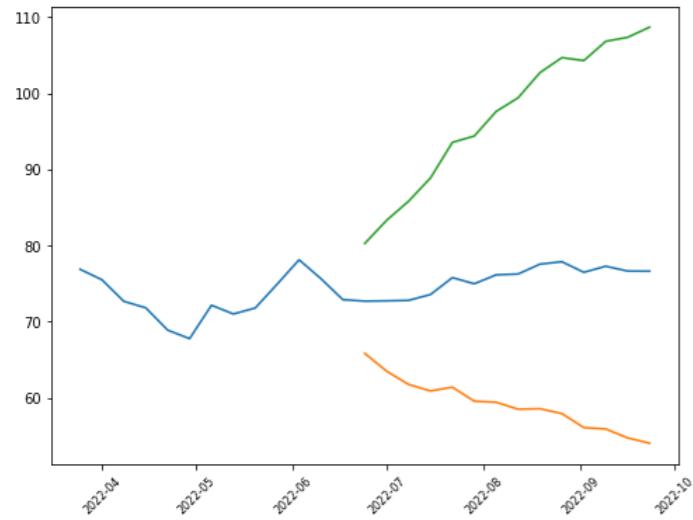
sell date: 2022-08-26  

expected return: 0.06834001922205156  

discounted return: 0.0010021087443656818  

quarter return: 1.0965269218558504

```



	2021-12-31	2021-09-30	2021-06-30	\
['quarterly_balance_sheet',				
Intangible Assets	3.910000e+07	4.270000e+07	4.410000e+07	
Capital Surplus	3.244000e+08	3.157000e+08	3.105000e+08	
Total Liab	1.827600e+10	1.793560e+10	1.589840e+10	
Total Stockholder Equity	9.530000e+08	9.040000e+08	9.014000e+08	
Other Current Liab	1.348000e+09	1.418700e+09	1.303800e+09	
Total Assets	1.922900e+10	1.883960e+10	1.679980e+10	
Common Stock	2.000000e+05	2.000000e+05	2.000000e+05	
Retained Earnings	7.242000e+08	6.825000e+08	6.752000e+08	
Good Will	5.810000e+07	5.810000e+07	5.460000e+07	
Treasury Stock	-9.580000e+07	-9.440000e+07	-8.450000e+07	
Other Assets	1.495000e+08	1.444000e+08	1.441000e+08	
Cash	9.834000e+08	1.109600e+09	1.075600e+09	
Total Current Liabilities	1.711980e+10	1.701090e+10	1.496010e+10	
Deferred Long Term Asset Charges	3.550000e+07	3.510000e+07	3.700000e+07	
Short Long Term Debt	4.074200e+09	4.301200e+09	3.623400e+09	
Other Stockholder Equity	-2.650000e+07	-2.510000e+07	-2.380000e+07	
Property Plant Equipment	2.169000e+08	2.186000e+08	2.210000e+08	
Total Current Assets	1.876540e+10	1.837580e+10	1.633600e+10	
Net Tangible Assets	8.558000e+08	8.032000e+08	8.027000e+08	
Short Term Investments	1.092410e+10	1.103200e+10	9.517200e+09	
Net Receivables	6.334000e+09	5.786700e+09	5.258400e+09	
Long Term Debt	1.012200e+09	7.953000e+08	7.866000e+08	
Inventory	5.239000e+08	4.475000e+08	4.848000e+08	
Accounts Payable	8.674800e+09	8.750500e+09	7.854300e+09	

	2021-03-31			
--	------------	--	--	--

Intangible Assets	4.800000e+07			
Capital Surplus	3.044000e+08			
Total Liab	1.493950e+10			
Total Stockholder Equity	8.602000e+08			
Other Current Liab	7.464000e+08			
Total Assets	1.579970e+10			
Common Stock	2.000000e+05			
Retained Earnings	6.410000e+08			
Good Will	5.450000e+07			
Treasury Stock	-8.540000e+07			
Other Assets	1.512000e+08			
Cash	1.001500e+09			
Total Current Liabilities	1.385720e+10			
Deferred Long Term Asset Charges	3.520000e+07			
Short Long Term Debt	3.628200e+09			
Other Stockholder Equity	-2.780000e+07			
Property Plant Equipment	1.832000e+08			
Total Current Assets	1.536280e+10			
Net Tangible Assets	7.577000e+08			
Short Term Investments	9.048500e+09			
Net Receivables	4.862000e+09			
Long Term Debt	9.650000e+08			
Inventory	4.508000e+08			
Accounts Payable	7.344300e+09]		

	2021-12-31	2021-09-30	\
--	------------	------------	---

['quarterly_cashflow',			
Change To Liabilities	-74200000.0	896700000.0	
Total Cashflows From Investing Activities	-7300000.0	-10600000.0	
Net Borrowings	2384000000.0	-27500000.0	
Total Cash From Financing Activities	241500000.0	-33400000.0	
Change To Operating Activities	-451700000.0	-361800000.0	
Issuance Of Stock	4600000.0	3200000.0	
Net Income	41700000.0	7300000.0	
Change In Cash	-367500000.0	697200000.0	
Effect Of Exchange Rate	-1500000.0	-2900000.0	
Total Cash From Operating Activities	-600200000.0	744100000.0	
Depreciation	12900000.0	15500000.0	
Change To Inventory	-76400000.0	37300000.0	
Change To Account Receivables	-66700000.0	149500000.0	
Other Cashflows From Financing Activities	-1500000.0	-500000.0	
Change To Netincome	3400000.0	10800000.0	
Capital Expenditures	-7300000.0	-8600000.0	
Repurchase Of Stock	NaN	-8600000.0	

	2021-06-30	2021-03-31	
--	------------	------------	--

Change To Liabilities	513200000.0	897000000.0	
Total Cashflows From Investing Activities	-104000000.0	-17600000.0	
Net Borrowings	-45300000.0	-61200000.0	
Total Cash From Financing Activities	-47000000.0	-58100000.0	
Change To Operating Activities	330000000.0	52200000.0	
Issuance Of Stock	2300000.0	3600000.0	
Net Income	34200000.0	55300000.0	
Change In Cash	660200000.0	706700000.0	
Effect Of Exchange Rate	4000000.0	-1400000.0	
Total Cash From Operating Activities	713600000.0	783800000.0	
Depreciation	11400000.0	10600000.0	
Change To Inventory	-34000000.0	-11700000.0	
Change To Account Receivables	-139200000.0	-232500000.0	
Other Cashflows From Financing Activities	-900000.0	-500000.0	
Change To Netincome	-700000.0	8300000.0	

```

Capital Expenditures      -13500000.0  -17600000.0
Repurchase Of Stock       -3100000.0   -3100000.0  ]
['quarterly_earnings',     Revenue    Earnings
Quarter
1Q2021  11223200000  55300000
2Q2021  10167500000  34200000
3Q2021  11822500000  7300000
4Q2021  14313900000  41700000]
['quarterly_financials',
Research Development      None        None
Effect Of Accounting Charges  None        None
Income Before Tax          52500000.0  4900000.0
Minority Interest           None        None
Net Income                  41700000.0  7300000.0
Selling General Administrative 219600000.0  206200000.0
Gross Profit                292900000.0  241800000.0
Ebit                         0.0        0.0
Operating Income             52500000.0  6900000.0
Other Operating Expenses     11900000.0  12200000.0
Interest Expense             None        None
Extraordinary Items          None        None
Non Recurring                None        None
Other Items                  None        None
Income Tax Expense           10800000.0  -2400000.0
Total Revenue                14313900000.0  11822500000.0
Total Operating Expenses     14261400000.0  11815600000.0
Cost Of Revenue               14021000000.0  11580700000.0
Total Other Income Expense Net 0.0        -2000000.0
Discontinued Operations      None        None
Net Income From Continuing Ops 41700000.0  7300000.0
Net Income Applicable To Common Shares 40500000.0  7000000.0

2021-06-30      2021-03-31
Research Development      None        None
Effect Of Accounting Charges  None        None
Income Before Tax          46000000.0  76300000.0
Minority Interest           None        None
Net Income                  34200000.0  55300000.0
Selling General Administrative 212700000.0  218600000.0
Gross Profit                280000000.0  316500000.0
Ebit                         0.0        0.0
Operating Income             45600000.0  77100000.0
Other Operating Expenses     10700000.0  11300000.0
Interest Expense             None        None
Extraordinary Items          None        None
Non Recurring                None        None
Other Items                  None        None
Income Tax Expense           11800000.0  2100000.0
Total Revenue                10167500000.0  11223200000.0
Total Operating Expenses     10121900000.0  11146100000.0
Cost Of Revenue               9887500000.0  10906700000.0
Total Other Income Expense Net 400000.0  -800000.0
Discontinued Operations      None        None
Net Income From Continuing Ops 34200000.0  55300000.0
Net Income Applicable To Common Shares 33100000.0  53600000.0 ]
['mutualfund_holders',
Holder      Shares Date Reported % Out \
0  iShares Core S&P Smallcap ETF 1183075  2022-01-30  0.0586
1  Vanguard Total Stock Market Index Fund 450490  2021-12-30  0.0223
2  iShares Russell 2000 ETF 393224  2022-01-30  0.0195
3  Fidelity Small Cap Stock Fund 387090  2022-02-27  0.0192
4  iShares S&P Smallcap 600 Value ETF 280124  2022-01-30  0.0139
5  Vanguard Extended Market Index Fund 226946  2021-12-30  0.0112
6  DFA U.S. Small Cap Series 183431  2022-01-30  0.0091
7  iShares Russell 2000 Value ETF 163769  2022-01-30  0.0081
8  DFA U.S. Micro Cap Series 151167  2022-01-30  0.0075
9  DFA U.S. Targeted Value Portfolio 147714  2022-01-30  0.0073

Value
0  77621550
1  27592512
2  25799426
3  29205940
4  18378935
5  13900442
6  12034907
7  10744884
8  9918066
9  9691515  ]
['options', ('2022-07-15',)]
symbol: TALO
sector: Energy
Index: SP600
vol_30d_2yr: 20408781.4453125
Sector 1YMF: -4.379999160766602
1YMF: -4.379999160766602
risk trend factor: -0.4965985614871265

```

```

beta currentRatio debtToEquity      ebitda ebitdaMargins forwardPE \
TALO 2.705179      0.566    134.226  459891008     0.37053 12.401317

freeCashflow grossMargins grossProfits heldPercentInstitutions \
TALO 190298752     0.77151   957576000      0.80874

industry marketCap operatingCashflow operatingMargins \
TALO Oil & Gas E&P 1543466368      411388000     0.00465

payoutRatio priceToBook priceToSalesTrailing12Months profitMargins \
TALO 0       2.287899    1.243551      -0.1474

quickRatio returnOnAssets returnOnEquity revenueGrowth revenuePerShare \
TALO 0.482      0.00129   -0.21686     1.219        15.179

sector sharesOutstanding shortRatio totalCash totalCashPerShare \
TALO Energy 81881504      3.93   69852000      0.853

totalDebt totalRevenue
TALO 1020993024 1241176960

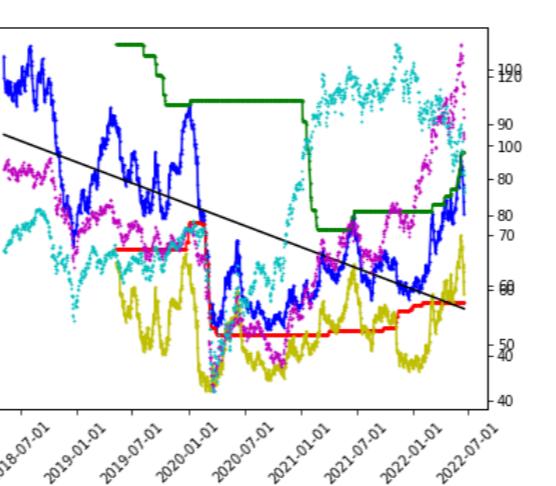
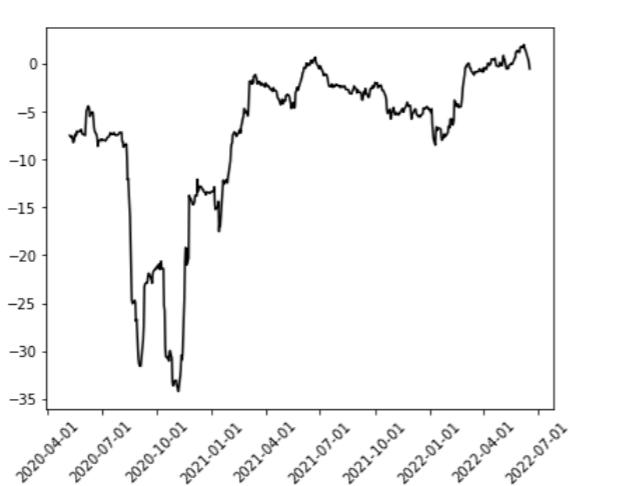
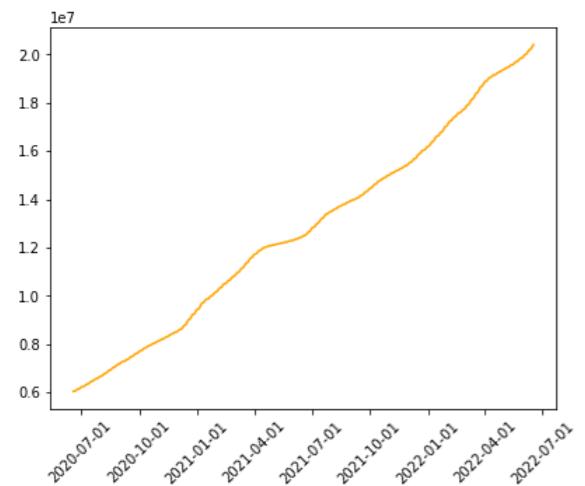
Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDDev 90d_lower 90d_upper
2022-06-17 18.610001 18.420168 21.889841 25.359515 19.298889 2.422677 14.453534 24.144243

```

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst	
TALO	1.661246	18.610001	20408781.445312	0.657711	0.240515	0.536905

l axis		r axis	
legend	symbol	legend	sector
blue		magenta	
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592



ets next 13 weeks

2022-06-17

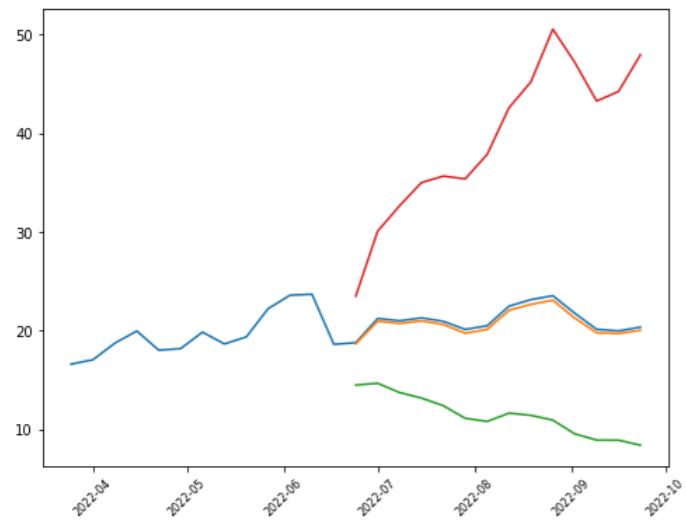
2022-06-28

inner cv scores:

```

best model: ['mul', 'mul', False]
best inner cv score, sdev (11 folds): 41.43457859222569 71.02454191322181
test cv mean error, stdev (10 folds): 41.43457859222569 71.02454191322182
sell date: 2022-08-26
expected return: 0.2646750095291923
discounted return: 0.0035641422565171332
quarter return: 1.3872427295363599

```



```
[{'quarterly_balance_sheet', 2021-12-31 2021-09-30 2021-06-30 \
Capital Surplus 1.676798e+09 1.671781e+09 1.666887e+09
Total Liab 2.006162e+09 2.111540e+09 2.165744e+09
Total Stockholder Equity 7.606530e+08 6.746240e+08 6.864210e+08
Other Current Liab 2.528150e+08 3.049030e+08 2.822840e+08
Total Assets 2.766815e+09 2.786164e+09 2.852165e+09
Common Stock 8.190000e+05 8.190000e+05 8.190000e+05
Other Current Assets 2.641000e+06 1.720000e+06 1.781000e+06
Retained Earnings -9.169640e+08 -9.979760e+08 -9.812850e+08
Other Liab 4.195010e+08 4.596920e+08 4.686610e+08
Other Assets 3.251600e+07 4.320100e+07 4.282800e+07
Cash 6.985200e+07 5.942700e+07 6.535400e+07
Total Current Liabilities 6.005260e+08 6.358320e+08 6.747440e+08
Short Long Term Debt 6.060000e+06 6.060000e+06 6.060000e+06
Property Plant Equipment 2.394296e+09 2.489235e+09 2.505121e+09
Total Current Assets 3.400030e+08 2.537280e+08 3.042160e+08
Net Tangible Assets 7.606530e+08 6.746240e+08 6.864210e+08
Net Receivables 2.194680e+08 1.465570e+08 1.882680e+08
Long Term Debt 9.566670e+08 9.787770e+08 9.765730e+08
Accounts Payable 8.581500e+07 1.060980e+08 1.111280e+08

2021-03-31
Capital Surplus 1.661840e+09
Total Liab 2.032540e+09
Total Stockholder Equity 8.071540e+08
Other Current Liab 1.808350e+08
Total Assets 2.839694e+09
Common Stock 8.170000e+05
Other Current Assets 3.481000e+06
Retained Earnings -8.555030e+08
Other Liab 4.489570e+08
Other Assets 4.364900e+07
Cash 6.497900e+07
Total Current Liabilities 4.822370e+08
Short Long Term Debt NaN
Property Plant Equipment 2.504046e+09
Total Current Assets 2.919990e+08
Net Tangible Assets 8.071540e+08
Net Receivables 1.908060e+08
Long Term Debt 1.049365e+09
Accounts Payable 7.277000e+07 ]
['quarterly_cashflow', 2021-12-31 2021-09-30 \
Change To Liabilities -4670000.0 -5367000.0
Total Cashflows From Investing Activities -81594000.0 -85520000.0
Net Borrowings -30879000.0 -5564000.0
Total Cash From Financing Activities -31721000.0 -8961000.0
Change To Operating Activities 59665000.0 -27476000.0
Net Income 81012000.0 -16691000.0
Change In Cash 10425000.0 -5927000.0
Total Cash From Operating Activities 123740000.0 88554000.0
Depreciation 119919000.0 102264000.0
Change To Account Receivables -64474000.0 41711000.0
Other Cashflows From Financing Activities -842000.0 -3356000.0
Change To Netincome -71009000.0 -9038000.0
Capital Expenditures -81751000.0 -85734000.0
Repurchase Of Stock NaN -41000.0

2021-06-30 2021-03-31
Change To Liabilities 14754000.0 -10978000.0
Total Cashflows From Investing Activities -53896000.0 -72737000.0
Net Borrowings -70303000.0 63639000.0
Total Cash From Financing Activities -77867000.0 36527000.0
Change To Operating Activities 25947000.0 2172000.0
Net Income -125782000.0 -121491000.0
Change In Cash 375000.0 30746000.0
Total Cash From Operating Activities 132138000.0 66956000.0
Depreciation 115298000.0 116642000.0
Change To Account Receivables 4475000.0 -17108000.0
Other Cashflows From Financing Activities -6594000.0 -24962000.0
Change To Netincome 93654000.0 94577000.0
Capital Expenditures -61101000.0 -64745000.0
Repurchase Of Stock -970000.0 -2150000.0 ]
['quarterly_earnings', Revenue Earnings
Quarter
1Q2021 266086000 -121491000
2Q2021 302815000 -125782000
3Q2021 290145000 -16691000
4Q2021 382131000 81012000]
['quarterly_financials', 2021-12-31 2021-09-30 2021-06-30 \
Research Development None None None
Effect Of Accounting Charges None None None
Income Before Tax 78659000.0 -17055000.0 -125284000.0
Minority Interest None None None
Net Income 81012000.0 -16691000.0 -125782000.0
Selling General Administrative 19084000.0 20427000.0 18077000.0
Gross Profit 307205000.0 220111000.0 230802000.0
```

Ebit	156262000.0	10860000.0	-91973000.0
Operating Income	156262000.0	10860000.0	-91973000.0
Other Operating Expenses	25959000.0	100228000.0	204857000.0
Interest Expense	-33102000.0	-32390000.0	-33570000.0
Extraordinary Items	None	None	None
Non Recurring	None	None	None
Other Items	None	None	None
Income Tax Expense	-2353000.0	-364000.0	498000.0
Total Revenue	382131000.0	290145000.0	302815000.0
Total Operating Expenses	225869000.0	279285000.0	394788000.0
Cost Of Revenue	74926000.0	70034000.0	72013000.0
Total Other Income Expense Net	-77603000.0	-27915000.0	-33311000.0
Discontinued Operations	None	None	None
Net Income From Continuing Ops	81012000.0	-16691000.0	-125782000.0
Net Income Applicable To Common Shares	81012000.0	-16691000.0	-125782000.0

2021-03-31

Research Development	None
Effect Of Accounting Charges	None
Income Before Tax	-120907000.0
Minority Interest	None
Net Income	-121491000.0
Selling General Administrative	17411000.0
Gross Profit	199458000.0
Ebit	-71103000.0
Operating Income	-71103000.0
Other Operating Expenses	151493000.0
Interest Expense	-34076000.0
Extraordinary Items	None
Non Recurring	None
Other Items	None
Income Tax Expense	584000.0
Total Revenue	266086000.0
Total Operating Expenses	337189000.0
Cost Of Revenue	66628000.0
Total Other Income Expense Net	-49804000.0
Discontinued Operations	None
Net Income From Continuing Ops	-121491000.0
Net Income Applicable To Common Shares	-121491000.0]

	Holder	Shares	Date Reported	\
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0	iShares Core S&P Smallcap ETF	2882867	2022-01-30
1	SPDR (R) Ser Tr-SPDR (R) S&P (R) Oil & Gas Exp...	2109180	2022-01-30
2	MainStay MacKay High Yield Corporate Bond Fund	2074193	2022-01-30
3	Vanguard Total Stock Market Index Fund	1284887	2021-12-30
4	iShares Russell 2000 ETF	853932	2022-01-30
5	iShares S&P Smallcap 600 Value ETF	674678	2022-01-30
6	Mainstay VP Funds Trust-MacKay High Yield Corp...	637880	2021-12-30
7	Vanguard Extended Market Index Fund	496971	2021-12-30
8	DFA U.S. Targeted Value Portfolio	462737	2022-01-30
9	Columbia Fds Ser Tr I-Columbia Small Cap Value...	433490	2022-01-30

% Out	Value
0	0.0349 30673704
1	0.0256 22441675
2	0.0251 22069413
3	0.0156 12591892
4	0.0103 9085836
5	0.0082 7178573
6	0.0077 6251224
7	0.0060 4870315
8	0.0056 4923521
9	0.0053 4612333]

['options', ('2022-07-15',)]

symbol: FANG

sector: Energy

Index: SP500

vol_30d_2yr: 60333589.6484375

Sector 1YMF: -21.420005798339844

1YMF: -21.420005798339844

risk trend factor: -0.5018744567990084

beta currentRatio debtToEquity dividendRate dividendYield \
FANG 2.181941 0.72 42.218 2.8 0.0229

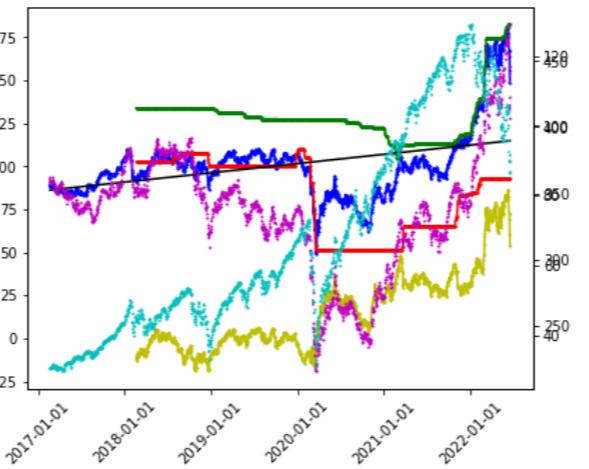
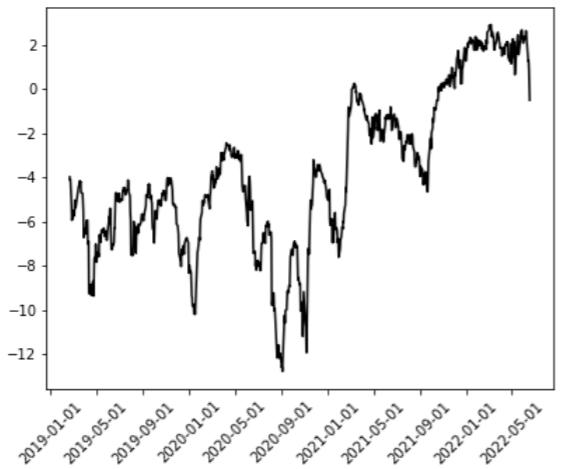
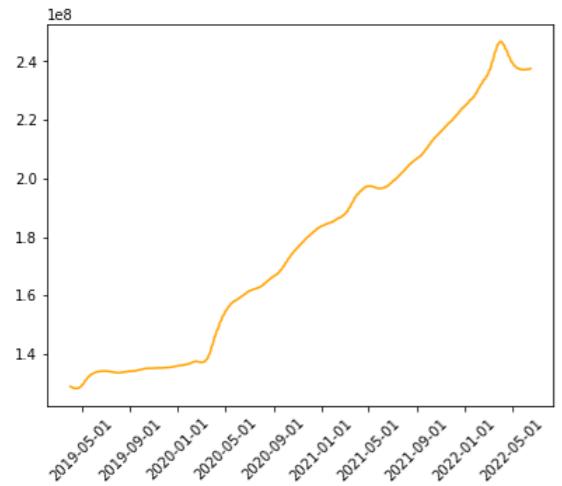
earningsGrowth ebitda ebitdaMargins forwardPE freeCashflow \
FANG 2.278 5171999744 0.67999 5.669953 958625024

grossMargins grossProfits heldPercentInstitutions industry \
FANG 0.87707 5577000000 0.91762 Oil & Gas E&P

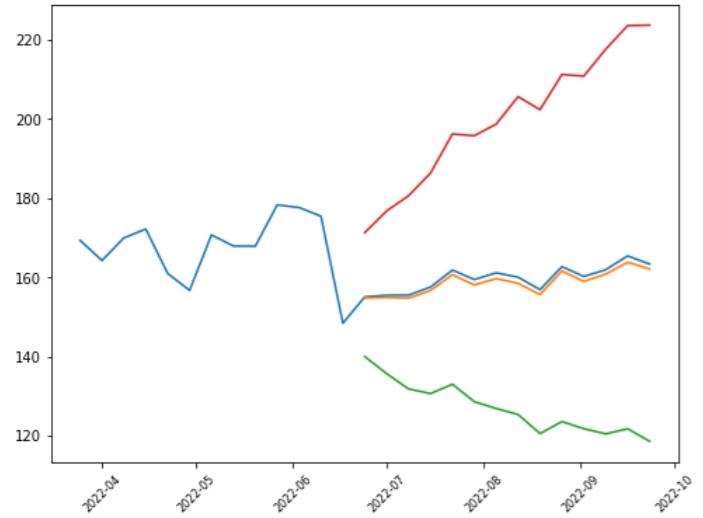
marketCap operatingCashflow operatingMargins payoutRatio pegRatio \
FANG 23227310080 4572000256 0.5071 0.1272 0.35

priceToBook priceToSalesTrailing12Months profitMargins quickRatio \
FANG 1.843084 3.053814 0.36037 0.656

returnOnAssets returnOnEquity revenueGrowth revenuePerShare sector \
--



ets next 13 weeks
 2022-06-17
 2022-06-28
 inner cv scores:
 best model: ['mul', 'add', True]
 best inner cv score, sdev (11 folds): 358.07619625976594 505.4123046499837
 test cv mean error, stdev (10 folds): 390.8189600260388 518.8379836210818
 sell date: 2022-09-16
 expected return: 0.11458809964025478
 discounted return: 0.0012477308646337004
 quarter return: 1.1215590034387684



	2022-03-31	2021-12-31	2021-09-30	\
['quarterly_balance_sheet',				
Total Stockholder Equity	1.390670e+11	1.390670e+11	1.358620e+11	
Net Tangible Assets	1.346820e+11	1.346820e+11	1.314600e+11	
Capital Surplus	NaN	1.728200e+10	1.706200e+10	
Total Liab	NaN	9.959500e+10	1.032260e+11	
Minority Interest	NaN	8.730000e+08	8.600000e+08	
Deferred Long Term Liab	NaN	2.235000e+09	1.096200e+10	
Other Current Liab	NaN	1.700000e+09	1.467000e+09	
Total Assets	NaN	2.395350e+11	2.399480e+11	
Common Stock	NaN	1.832000e+09	1.832000e+09	
Other Current Assets	NaN	5.840000e+08	6.500000e+08	
Retained Earnings	NaN	1.655460e+11	1.630440e+11	
Other Liab	NaN	3.918300e+10	4.098200e+10	
Good Will	NaN	4.385000e+09	4.402000e+09	
Treasury Stock	NaN	-4.559300e+10	-4.607600e+10	
Other Assets	NaN	1.008700e+10	1.436700e+10	
Cash	NaN	5.640000e+09	5.998000e+09	
Total Current Liabilities	NaN	2.679100e+10	2.518800e+10	
Deferred Long Term Asset Charges	NaN	5.659000e+09	NaN	
Short Long Term Debt	NaN	1.460000e+08	NaN	
Other Stockholder Equity	NaN	-4.129000e+09	-4.658000e+09	
Property Plant Equipment	NaN	1.506290e+11	1.479450e+11	
Total Current Assets	NaN	3.373800e+10	3.213700e+10	
Long Term Investments	NaN	4.069600e+10	4.109700e+10	
Short Term Investments	NaN	3.500000e+07	3.400000e+07	
Net Receivables	NaN	1.816800e+10	1.616300e+10	
Long Term Debt	NaN	3.066400e+10	3.705600e+10	
Inventory	NaN	6.305000e+09	6.129000e+09	
Accounts Payable	NaN	1.645400e+10	1.530800e+10	

2021-06-30

Total Stockholder Equity	1.331820e+11
Net Tangible Assets	1.287800e+11
Capital Surplus	1.704400e+10
Total Liab	1.088950e+11
Minority Interest	7.290000e+08
Deferred Long Term Liab	1.096100e+10
Other Current Liab	1.212000e+09
Total Assets	2.428060e+11
Common Stock	1.832000e+09
Other Current Assets	4.810000e+08
Retained Earnings	1.596400e+11
Other Liab	4.122700e+10
Good Will	4.402000e+09
Treasury Stock	-4.533400e+10
Other Assets	1.367200e+10
Cash	7.527000e+09
Total Current Liabilities	2.814700e+10
Deferred Long Term Asset Charges	NaN
Short Long Term Debt	NaN
Other Stockholder Equity	-4.535000e+09
Property Plant Equipment	1.512080e+11
Total Current Assets	3.297300e+10
Long Term Investments	4.055100e+10
Short Term Investments	3.400000e+07
Net Receivables	1.560200e+10
Long Term Debt	3.952100e+10
Inventory	6.239000e+09
Accounts Payable	1.471900e+10

['quarterly_cashflow', 2022-03-31 2021-12-31 \]

Change To Liabilities	0.000000e+00	1.633000e+09
Total Cashflows From Investing Activities	-7.000000e+08	-1.389000e+09
Net Borrowings	-2.000000e+09	-6.004000e+09
Total Cash From Financing Activities	-1.400000e+09	-8.290000e+09
Change To Operating Activities	-9.000000e+08	1.400000e+07
Issuance Of Stock	4.600000e+09	2.830000e+08
Net Income	6.259000e+09	5.055000e+09
Change In Cash	6.000000e+09	-2.300000e+08
Repurchase Of Stock	-1.300000e+09	-1.300000e+09
Total Cash From Operating Activities	8.100000e+09	9.458000e+09
Depreciation	3.700000e+09	4.433000e+09
Dividends Paid	-2.700000e+09	-2.567000e+09
Change To Netincome	-9.590000e+08	-2.900000e+07
Capital Expenditures	-2.000000e+09	-2.606000e+09
Investments	NaN	4.160000e+08
Effect Of Exchange Rate	NaN	-9.000000e+06
Other Cashflows From Investing Activities	NaN	1.200000e+07
Change To Inventory	NaN	-1.770000e+08
Change To Account Receivables	NaN	-1.856000e+09
Other Cashflows From Financing Activities	NaN	-2.000000e+06

2021-09-30 2021-06-30

Change To Liabilities	9.100000e+07	2.152000e+09
Total Cashflows From Investing Activities	-1.341000e+09	-1.572000e+09
Net Borrowings	-5.628000e+09	-2.463000e+09
Total Cash From Financing Activities	-8.825000e+09	-4.945000e+09

```

Change To Operating Activities      -1.990000e+08  2.300000e+07
Issuance Of Stock                 2.830000e+08  1.060000e+08
Net Income                         6.111000e+09  3.082000e+09
Change In Cash                      -1.663000e+09  4.240000e+08
Repurchase Of Stock                -6.180000e+08  -6.180000e+08
Total Cash From Operating Activities 8.579000e+09  6.954000e+09
Depreciation                        4.304000e+09  4.522000e+09
Dividends Paid                      -2.571000e+09  -2.573000e+09
Change To Netincome                  -1.303000e+09  -4.420000e+08
Capital Expenditures                -1.907000e+09  -1.797000e+09
Investments                          5.000000e+06  6.000000e+06
Effect Of Exchange Rate             -7.600000e+07  -1.300000e+07
Other Cashflows From Investing Activities 3.500000e+08  1.400000e+07
Change To Inventory                  1.180000e+08  -5.220000e+08
Change To Account Receivables       -9.670000e+08  -1.898000e+09
Other Cashflows From Financing Activities -8.000000e+06  -1.500000e+07 ]]
['quarterly_earnings',           Revenue   Earnings
Quarter
2Q2021    36117000000  3082000000
3Q2021    42552000000  6111000000
4Q2021    45861000000  5055000000
1Q2022    52314000000  6259000000]
```

```
[ 'quarterly_financials',          2022-03-31  2021-12-31 \
```

	2022-03-31	2021-12-31
Research Development	None	None
Effect Of Accounting Charges	None	None
Income Before Tax	9054000000.0	6985000000.0
Minority Interest	Nan	873000000.0
Net Income	6259000000.0	5055000000.0
Selling General Administrative	6669000000.0	6864000000.0
Gross Profit	19665000000.0	18520000000.0
Ebit	7131000000.0	5283000000.0
Operating Income	7131000000.0	5283000000.0
Other Operating Expenses	2002000000.0	1782000000.0
Interest Expense	-136000000.0	-155000000.0
Extraordinary Items	None	None
Non Recurring	None	None
Other Items	None	None
Income Tax Expense	2777000000.0	1903000000.0
Total Revenue	52314000000.0	45861000000.0
Total Operating Expenses	45183000000.0	40578000000.0
Cost Of Revenue	32649000000.0	27341000000.0
Total Other Income Expense Net	1923000000.0	1702000000.0
Discontinued Operations	None	None
Net Income From Continuing Ops	6277000000.0	5082000000.0
Net Income Applicable To Common Shares	6259000000.0	5055000000.0

```
2021-09-30  2021-06-30
```

	2021-09-30	2021-06-30
Research Development	None	None
Effect Of Accounting Charges	None	None
Income Before Tax	8055000000.0	4422000000.0
Minority Interest	860000000.0	729000000.0
Net Income	6111000000.0	3082000000.0
Selling General Administrative	6110000000.0	6160000000.0
Gross Profit	18718000000.0	15488000000.0
Ebit	6063000000.0	3131000000.0
Operating Income	6063000000.0	3131000000.0
Other Operating Expenses	2083000000.0	1562000000.0
Interest Expense	-174000000.0	-185000000.0
Extraordinary Items	None	None
Non Recurring	None	None
Other Items	None	None
Income Tax Expense	1940000000.0	1328000000.0
Total Revenue	42552000000.0	36117000000.0
Total Operating Expenses	36489000000.0	32986000000.0
Cost Of Revenue	23834000000.0	20629000000.0
Total Other Income Expense Net	1992000000.0	1291000000.0
Discontinued Operations	None	None
Net Income From Continuing Ops	6115000000.0	3094000000.0
Net Income Applicable To Common Shares	6111000000.0	3082000000.0]

```
[ 'mutualfund_holders',           Holder   Shares Date Reported \
```

	Vanguard Total Stock Market Index Fund	54780688	2021-12-30
0	Select Sector SPDR Fund-Energy Select	51246464	2022-01-30
1	Vanguard 500 Index Fund	40823519	2021-12-30
2	SPDR S&P 500 ETF Trust	20503512	2022-01-30
3	Fidelity 500 Index Fund	19741038	2022-02-27
4	iShares Core S&P 500 ETF	16032863	2022-01-30
5	Vanguard Index-Value Index Fund	14729977	2021-12-30
6	Vanguard Institutional Index Fund-Institutional...	14524646	2021-12-30
7	Washington Mutual Investors Fund	12690652	2022-01-30
8	Franklin Custodian Funds-Income Fund	12000000	2021-12-30

% Out	Value
0.0279	6428513736
0.0261	6730198117
0.0208	4790639954
0.0104	2692726230

```

4 0.0100 2842709472
5 0.0082 2105595897
6 0.0075 1728562800
7 0.0074 1704467208
8 0.0065 1666663327
9 0.0061 1408200000 ]]
['options', ('2023-01-20', '2024-01-19')]
['sustainability', Value
2022-5
palmOil False
controversialWeapons False
gambling False
socialScore 10.63
nuclear False
furLeather False
alcoholic False
gmo False
catholic False
socialPercentile 0
peerCount 66
governanceScore 9.95
environmentPercentile 0
animalTesting True
tobacco False
totalEsg 43
highestControversy 3
esgPerformance None
coal False
pesticides False
adult False
percentile 92.22
peerGroup Oil & Gas Producers
smallArms False
environmentScore 22.42
governancePercentile 0
militaryContract False]
symbol: CTRA
sector: Energy
Index: SP500
vol_30d_2yr: 166901859.9609375
Sector 1YMF: -5.129997253417969
1YMF: -5.129997253417969
risk trend factor: -0.5064163552240363
    beta currentRatio debtToEquity dividendRate dividendYield \
CTRA -0.189215 1.751 29.377 0.6 0.0201

    earningsGrowth ebitda ebitdaMargins forwardPE freeCashflow \
CTRA 2.487 2364999936 0.64441 7.722689 1148249984

    grossMargins grossProfits heldPercentInstitutions industry \
CTRA 0.77684 2851000000 0.94558 Oil & Gas E&P

    marketCap operatingCashflow operatingMargins payoutRatio pegRatio \
CTRA 22430345216 1667000064 0.45559 0.182 0.09

    priceToBook priceToSalesTrailing12Months profitMargins quickRatio \
CTRA 4.737113 6.111811 0.31553 1.699

    returnOnAssets returnOnEquity revenueGrowth revenuePerShare sector \
CTRA 0.08557 0.16538 4.191 7.296 Energy

    sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
CTRA 813577984 3.2 1036000000 1.273 3463000064

    totalRevenue trailingPE
CTRA 3670000128 31.365187

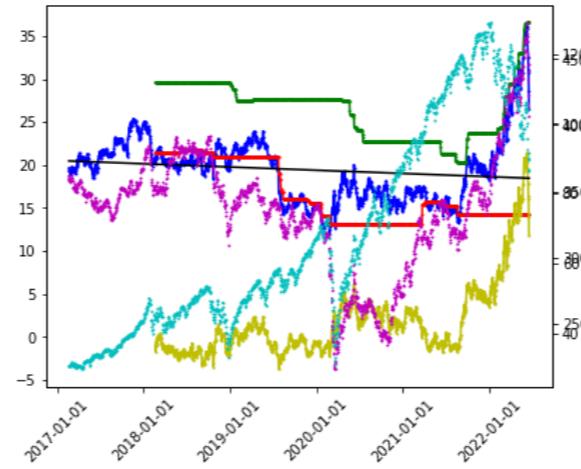
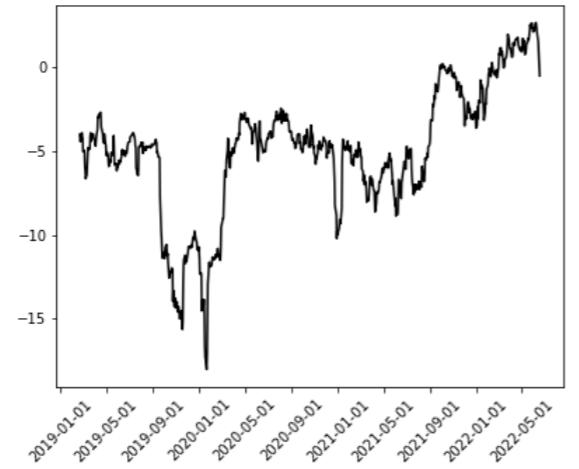
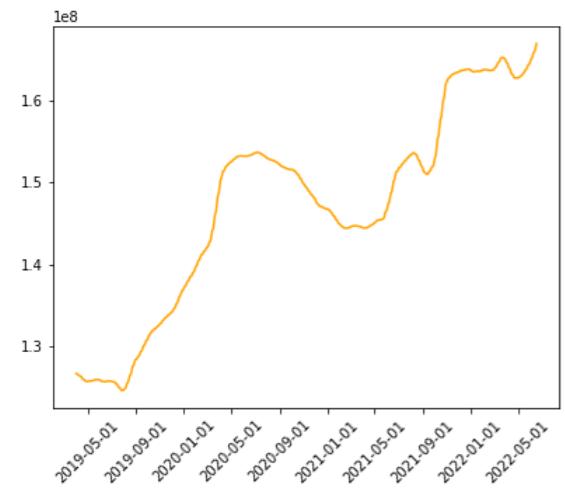
Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper
2022-06-17 26.540001 28.387845 33.230635 38.073425 29.960952 3.127376 23.706199 36.215704

volume_factor latest_p vol_30d_2yr pct_2yr adf hurst
CTRA 1.576163 26.540001 166901859.960938 0.550516 0.345461 0.448893

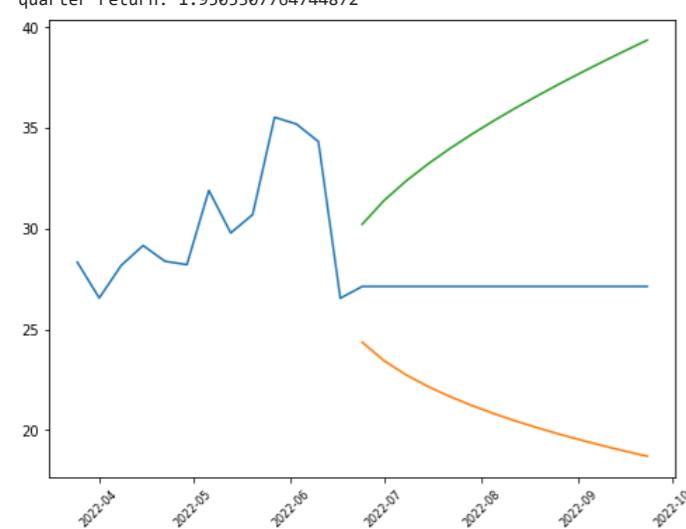
```

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -287.8400573730469
Index Volume Factor: 1.1835166983613057
Index Risk Trend Factor: -3.791860877423899



ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, None]
best inner cv score, sdev (11 folds): 9.14798122065995 10.976081716541326
test cv mean error, stdev (10 folds): 10.006804995399234 11.153853405723973
sell date: 2022-06-24
expected return: 0.022024965342179896
discounted return: 0.007288405208153881
quarter return: 1.9505307764744872



```
[ 'quarterly_balance_sheet', 2021-12-31 2021-09-30 2021-06-30 \
Capital Surplus 1.091100e+10 1.823373e+09 1.815770e+09
Total Liab 8.112000e+09 2.404585e+09 2.310672e+09
Total Stockholder Equity 1.173800e+10 2.326112e+09 2.299895e+09
Deferred Long Term Liab 5.000000e+06 5.329000e+06 5.844000e+06
Other Current Liab 1.880000e+08 2.128940e+08 7.719900e+07
Total Assets 1.990000e+10 4.730697e+09 4.610567e+09
Common Stock 8.900000e+07 4.786200e+07 4.786200e+07
Other Current Assets 2.400000e+07 1.323500e+07 1.540000e+07
Retained Earnings 2.563000e+09 2.276071e+09 2.257320e+09
Other Liab 3.512000e+09 9.650310e+08 9.577370e+08
Treasury Stock -1.825000e+09 -1.821194e+09 -1.821057e+09
Other Assets 7.200000e+07 3.109900e+07 3.170800e+07
Cash 1.036000e+09 7.627000e+07 1.581470e+08
Total Current Liabilities 1.220000e+09 4.668100e+08 3.786840e+08
Other Stockholder Equity 1.000000e+06 2.007000e+06 2.144000e+06
Property Plant Equipment 1.769200e+10 4.256875e+09 4.182793e+09
Total Current Assets 2.136000e+09 4.427230e+08 3.960660e+08
Net Tangible Assets 1.173800e+10 2.326112e+09 2.299895e+09
Net Receivables 1.037000e+09 3.404370e+08 2.051240e+08
Long Term Debt 3.125000e+09 9.465090e+08 9.463160e+08
Inventory 3.900000e+07 1.278100e+07 1.739500e+07
Accounts Payable 7.470000e+08 2.271920e+08 1.662560e+08
Short Long Term Debt NaN NaN 1.000000e+08
```

```
2021-03-31
Capital Surplus 1.808232e+09
Total Liab 2.244882e+09
Total Stockholder Equity 2.305970e+09
Deferred Long Term Liab 6.360000e+06
Other Current Liab 1.989500e+07
Total Assets 4.550852e+09
Common Stock 4.783800e+07
Other Current Assets 2.198400e+07
Retained Earnings 2.270819e+09
Other Liab 9.549700e+08
Treasury Stock -1.820919e+09
Other Assets 3.078400e+07
Cash 1.736590e+08
Total Current Liabilities 3.150920e+08
Other Stockholder Equity 2.282000e+06
Property Plant Equipment 4.108153e+09
Total Current Assets 4.119150e+08
Net Tangible Assets 2.305970e+09
Net Receivables 2.004020e+08
Long Term Debt 9.461230e+08
Inventory 1.587000e+07
Accounts Payable 1.691010e+08
Short Long Term Debt 1.000000e+08 ]
```

```
2021-12-31 2021-09-30 \
```

```
[ 'quarterly_cashflow',
Change To Liabilities -17390000.0 76262000.0
Total Cashflows From Investing Activities 771721000.0 -183894000.0
Net Borrowings -2000000.0 -100000000.0
Total Cash From Financing Activities -764618000.0 -143963000.0
Change To Operating Activities 17176000.0 -9218000.0
Net Income 938468000.0 62714000.0
Change In Cash 959440000.0 -82663000.0
Repurchase Of Stock -108431000.0 -108431000.0
Total Cash From Operating Activities 952337000.0 245194000.0
Depreciation 410014000.0 97289000.0
Dividends Paid -652187000.0 -43963000.0
Change To Inventory 2511000.0 4614000.0
Change To Account Receivables -159015000.0 -102009000.0
Other Cashflows From Financing Activities -2000000.0 -2000000.0
Change To Netincome -320852000.0 148138000.0
Capital Expenditures -268960000.0 -184101000.0
```

```
2021-06-30 2021-03-31
```

```
Change To Liabilities -15297000.0 3425000.0
Total Cashflows From Investing Activities -151302000.0 -123525000.0
Net Borrowings -100000000.0 -88000000.0
Total Cash From Financing Activities -43963000.0 -133456000.0
Change To Operating Activities 4956000.0 -13914000.0
Net Income 30464000.0 126354000.0
Change In Cash -16323000.0 33546000.0
Repurchase Of Stock -108431000.0 -5569000.0
Total Cash From Operating Activities 178942000.0 290527000.0
Depreciation 91549000.0 94148000.0
Dividends Paid -43963000.0 -39887000.0
Change To Inventory -1525000.0 -600000.0
Change To Account Receivables 15143000.0 16881000.0
Other Cashflows From Financing Activities -2000000.0 -2000000.0
Change To Netincome 92703000.0 40011000.0
Capital Expenditures -151322000.0 -123617000.0 ]
[ 'quarterly_earnings', Revenue Earnings
Quarter
```

```

1Q2021 472918000 126354000
2Q2021 411788000 30464000
3Q2021 641678000 62714000
4Q2021 2143616000 938468000]
['quarterly_financials',
2021-12-31 2021-09-30 \
Research Development None None
Effect Of Accounting Charges None None
Income Before Tax 1214465000.0 83216000.0
Minority Interest None None
Net Income 938468000.0 62714000.0
Selling General Administrative 95410000.0 24998000.0
Gross Profit 1797984000.0 471530000.0
Ebit 1298389000.0 135756000.0
Operating Income 1298389000.0 135756000.0
Other Operating Expenses -14836000.0 209489000.0
Interest Expense -24488000.0 -12577000.0
Extraordinary Items None None
Non Recurring None None
Other Items None None
Income Tax Expense 275997000.0 20502000.0
Total Revenue 2143616000.0 641678000.0
Total Operating Expenses 845227000.0 505922000.0
Cost Of Revenue 345632000.0 170148000.0
Total Other Income Expense Net -83924000.0 -52540000.0
Discontinued Operations None None
Net Income From Continuing Ops 938468000.0 62714000.0
Net Income Applicable To Common Shares 935468000.0 62714000.0

```

```

2021-06-30 2021-03-31
Research Development None None
Effect Of Accounting Charges None None
Income Before Tax 41304000.0 163015000.0
Minority Interest None None
Net Income 30464000.0 126354000.0
Selling General Administrative 16837000.0 26755000.0
Gross Profit 262146000.0 319340000.0
Ebit 60088000.0 177767000.0
Operating Income 60088000.0 177767000.0
Other Operating Expenses 91304000.0 18043000.0
Interest Expense -12558000.0 -12377000.0
Extraordinary Items None None
Non Recurring None None
Other Items None None
Income Tax Expense 10840000.0 36661000.0
Total Revenue 411788000.0 472918000.0
Total Operating Expenses 351700000.0 295151000.0
Cost Of Revenue 149642000.0 153578000.0
Total Other Income Expense Net -18784000.0 -14752000.0
Discontinued Operations None None
Net Income From Continuing Ops 30464000.0 126354000.0
Net Income Applicable To Common Shares 30464000.0 126354000.0 ]

```

```

['mutualfund_holders',
0 Select Sector SPDR Fund-Energy Select 23925372 2022-01-30
1 Vanguard Total Stock Market Index Fund 23123140 2021-12-30
2 Vanguard Small-Cap Index Fund 20493160 2021-12-30
3 Vanguard 500 Index Fund 17229139 2021-12-30
4 Washington Mutual Investors Fund 16985001 2022-01-30
5 Vanguard Fenway Funds-Equity Income Fund 16267453 2021-12-30
6 Income Fund of America Inc 13333912 2022-01-30
7 Vanguard Small-Cap Growth Index Fund 12758989 2021-12-30
8 Victory Portfolios-Sycamore Established Value ... 12049383 2022-01-30
9 Fundamental Investors Inc 11357657 2021-12-30

```

```

% Out Value
0 0.0297 523965646
1 0.0287 439339660
2 0.0254 389370040
3 0.0214 327353641
4 0.0211 371971521
5 0.0202 309081607
6 0.0165 292012672
7 0.0158 242420791
8 0.0150 263881487
9 0.0141 215795483 ]

```

```

['options', ('2022-07-15', '2022-09-16', '2023-01-20', '2024-01-19')]
['sustainability', Value
2022-5

```

```

palmOil False
controversialWeapons False
gambling False
socialScore 14.01
nuclear False
furLeather False
alcoholic False
gmo False
catholic False

```

```

socialPercentile          0
peerCount                 66
governanceScore           9.28
environmentPercentile     0
animalTesting              False
tobacco                   False
totalEsg                  46.68
highestControversy         2
esgPerformance            None
coal                       False
pesticides                False
adult                      False
percentile                95.93
peerGroup                 Oil & Gas Producers
smallArms                 False
environmentScore           23.39
governancePercentile      0
militaryContract           False]
symbol: DLTR
sector: Consumer Defensive
Index: SP500
vol_30d_2yr: 54464099.8046875
Sector 1YMF: -24.44001007080078
1YMF: -24.44001007080078
risk trend factor: -0.5098041868097398
    beta currentRatio debtToEquity earningsGrowth      ebitda \
DLTR  0.702813        1.464       120.278        0.481   2793100032

ebitdaMargins forwardPE freeCashflow grossMargins grossProfits \
DLTR  0.10444   16.121374   83287504        0.3037  7746100000

heldPercentInstitutions      industry      marketCap operatingCashflow \
DLTR  1.01262   Discount Stores  33703608320        1413799936

operatingMargins payoutRatio pegRatio priceToBook \
DLTR  0.07706        0       1.15      4.106654

priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
DLTR  1.260226        0.05571      0.284      0.05933

returnOnEquity revenueGrowth revenuePerShare      sector \
DLTR  0.19035        0.065      118.376  Consumer Defensive

sharesOutstanding shortRatio      totalCash totalCashPerShare      totalDebt \
DLTR  224556000        1.34   1218499968        5.426  9912699904

totalRevenue trailingPE
DLTR  26744100864  22.869114

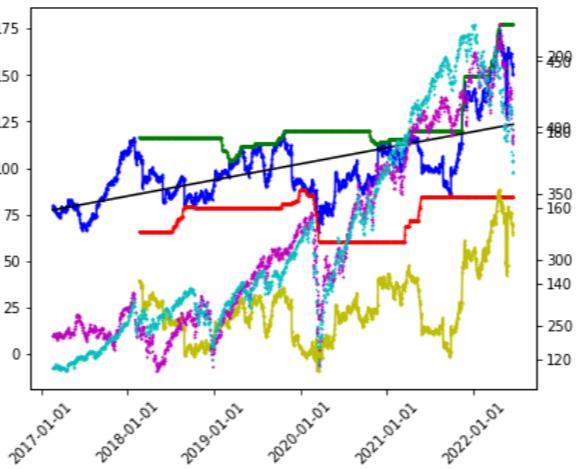
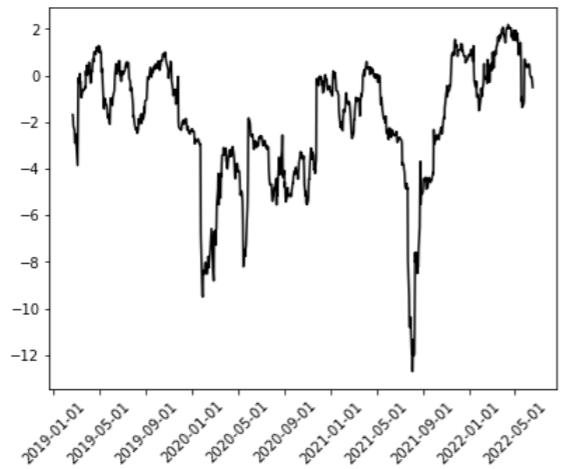
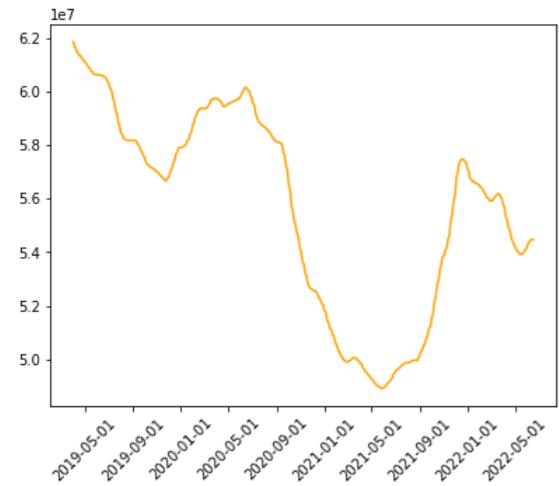
```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	150.089996	127.330989	151.813809	176.296629	158.647302	10.32126	138.004781	179.289823

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst	
DLTR	1.139688	150.089996	54464099.804688	0.708383	0.508611	0.437414

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

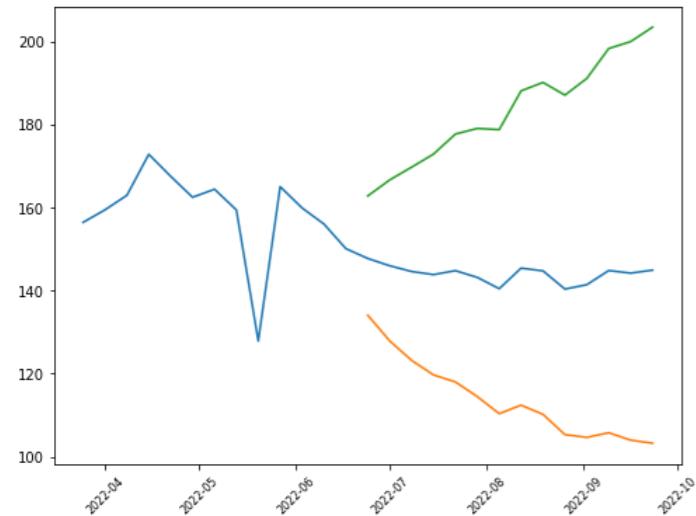
Sector 1YMF: -74.80001831054688
Sector Volume Factor: 1.4135920452708397
Sector Risk Trend Factor: -2.283970024749523
Index 1YMF: -287.8400573730469
Index Volume Factor: 1.1835166983613057
Index Risk Trend Factor: -3.791860877423899



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'add', True]
best inner cv score, sdev (11 folds): 229.2774322108454 335.5590360408042
test cv mean error, stdev (10 folds): 230.18291994580483 351.92450158537497
sell date: 2022-06-24
expected return: -0.0157532659049958
discounted return: -0.005278906452832355
quarter return: 0.6145003391173828

```



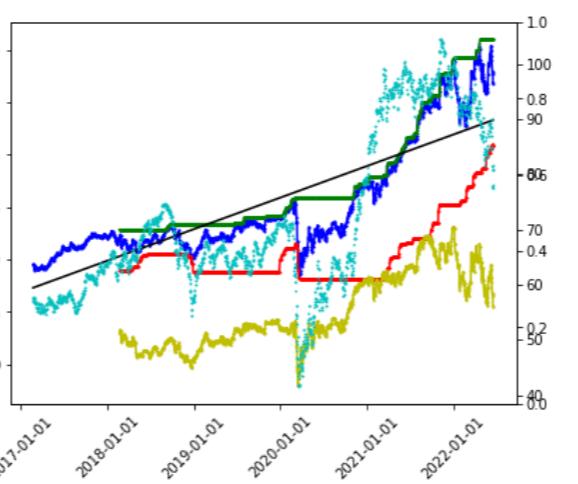
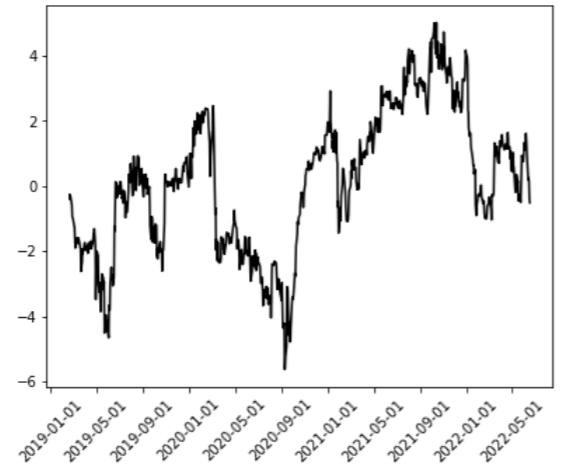
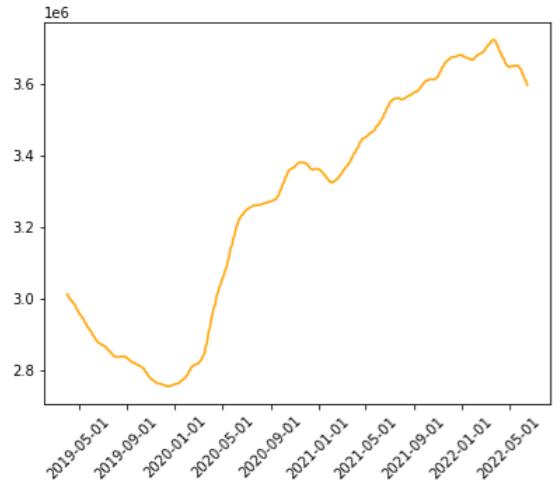
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['options', ('2022-08-19', '2023-01-20', '2024-01-19')]
['sustainability', Value
2022-5
palmoil False
controversialWeapons False
gambling False
socialScore 7.41
nuclear False
furLeather False
alcoholic False
gmo False
catholic False
socialPercentile None
peerCount 57
governanceScore 4.27
environmentPercentile None
animalTesting False
tobacco False
totalEsg 15.08
highestControversy 2
esgPerformance UNDER_PERF
coal False
pesticides False
adult False
percentile 9.94
peerGroup Retailing
smallArms False
environmentScore 3.4
governancePercentile None
militaryContract False]
symbol: EXLS
sector: error
sector: error
Index: SP600
vol_30d_2yr: 3597554.296875
Sector 1YMF: -13.410011291503906
1YMF: -13.410011291503906
risk trend factor: -0.516763501677879
Empty DataFrame
Columns: []
Index: [EXLS]
```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	134.259995	126.522812	140.06127	153.599727	140.494604	6.235211	128.024183	152.965025

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
EXLS	1.162846	134.259995	3597554.296875	0.786612	0.946996

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592



```

inner cv scores:
best model: ['add', 'add', False]
best inner cv score, sdev (11 folds): 195.43581236748193 180.93710911963225
test cv mean error, stdev (10 folds): 207.63430624701405 185.40557073013994
sell date: 2022-08-26
expected return: 0.0346023544217277
discounted return: 0.0005155442755926387
quarter return: 1.0485600598459583

```



```
[ 'options', ('2022-07-15',) ]
symbol: PDCE
sector: Energy
Index: SP400
vol_30d_2yr: 24813862.890625
Sector 1YMF: -14.360000610351562
1YMF: -14.360000610351562
risk trend factor: -0.5396467599014401
    beta currentRatio debtToEquity dividendRate dividendYield \
PDCE 2.747277      0.575      34.654      1.4      0.0193

ebitda ebitdaMargins forwardPE freeCashflow grossMargins \
PDCE 1255468032      0.45227      3.352418      598676224      0.89205

grossProfits heldPercentInstitutions industry marketCap \
PDCE 2111095000      0.97879 Oil & Gas E&P 6742601728

operatingCashflow operatingMargins payoutRatio pegRatio priceToBook \
PDCE 1683784960      0.21746      0.1225      0.15      2.349685

priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
PDCE 2.42894      0.1799      0.555      0.06877

returnOnEquity revenueGrowth revenuePerShare sector sharesOutstanding \
PDCE 0.18662      0.877      28.416 Energy 99272704

shortRatio totalCash totalCashPerShare totalDebt totalRevenue \
PDCE 5.79 171156992      1.794 958110016 2775943936

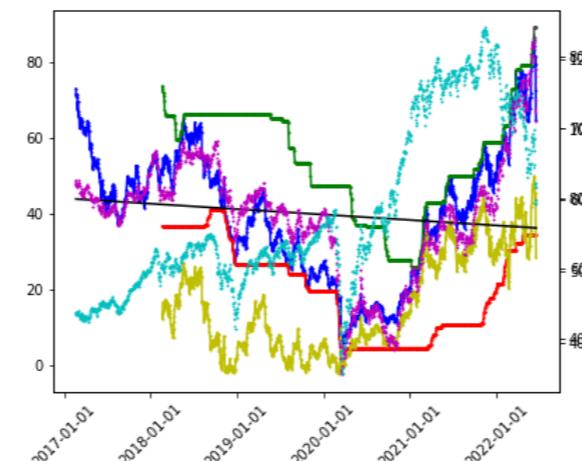
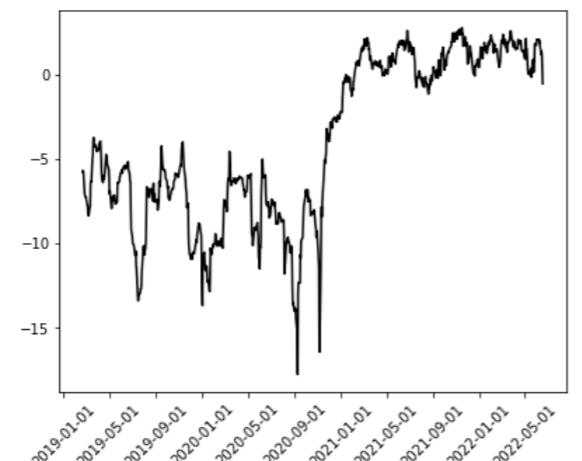
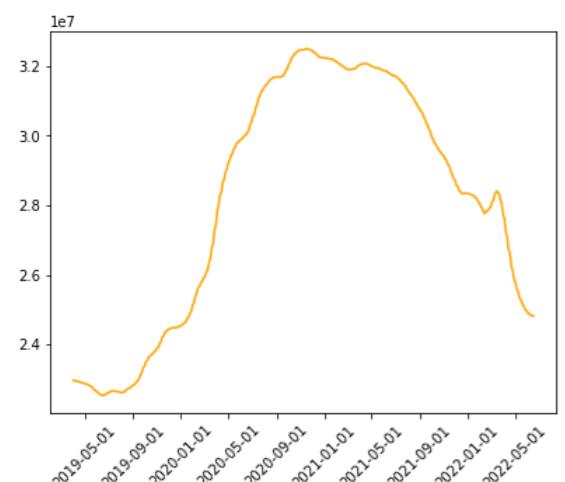
trailingPE
PDCE 13.489574
```

	Adj	Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDiv	90d_lower	90d_upper
2022-06-17	64.779999	63.693839	77.329841	90.965843	73.805873	5.730229	62.345416	85.26633	

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst	
PDCE	1.314132	64.779999	24813862.890625	0.689138	0.390825	0.487351

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

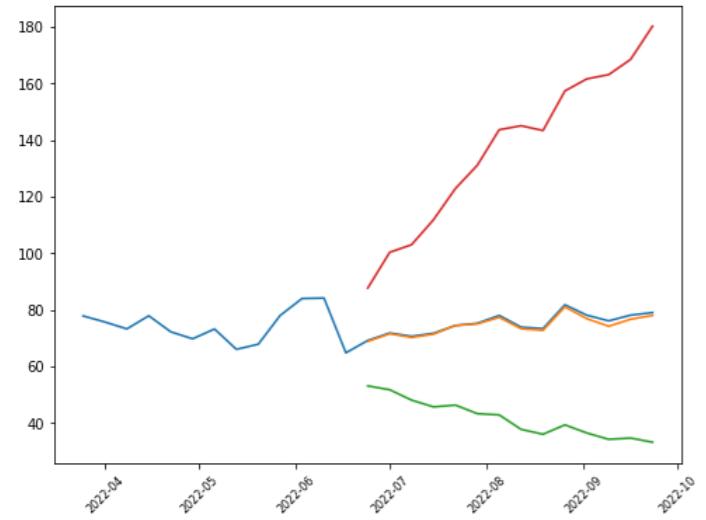
Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -69.05999755859375
Index Volume Factor: 0.5765983741853883
Index Risk Trend Factor: -5.134573474205833



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['mul', 'add', False]
best inner cv score, sdev (11 folds): 66.24561130493544 64.85907656292328
test cv mean error, stdev (10 folds): 70.97253191847695 66.19371421688827
sell date: 2022-08-26
expected return: 0.2620658318403486
discounted return: 0.003532739518863126
quarter return: 1.3832548275684022

```



```

['options', ('2022-07-15', '2022-12-16')]
symbol: SAFT
sector: Financial Services
Index: SP600
vol_30d_2yr: 1389322.8515625
Sector 1YMF: -6.50007629394531
1YMF: -6.50007629394531
risk trend factor: -0.5453023882169435
    beta currentRatio debtToEquity dividendRate dividendYield \
SAFT  0.32598      0.362       6.16        3.6       0.0431

    earningsGrowth   ebitda ebitdaMargins forwardPE freeCashflow \
SAFT     -0.388  171688000      0.19402  20.597727  117472752

    grossMargins grossProfits heldPercentInstitutions \
SAFT      0.18622  164792000      0.82232

    industry marketCap operatingCashflow \
SAFT  Insurance—Property & Casualty  1357836800      141394000

    operatingMargins payoutRatio priceToBook priceToSalesTrailing12Months \
SAFT      0.18622      0.521    1.463096      1.534433

    profitMargins quickRatio returnOnAssets returnOnEquity revenueGrowth \
SAFT      0.14771      0.256     0.04938     0.14428      -0.037

    revenuePerShare sector sharesOutstanding shortRatio \
SAFT      59.675  Financial Services      14982200      2.86

    totalCash totalCashPerShare totalDebt totalRevenue trailingPE
SAFT  63603000      4.335  57115000  884910976      8.88007

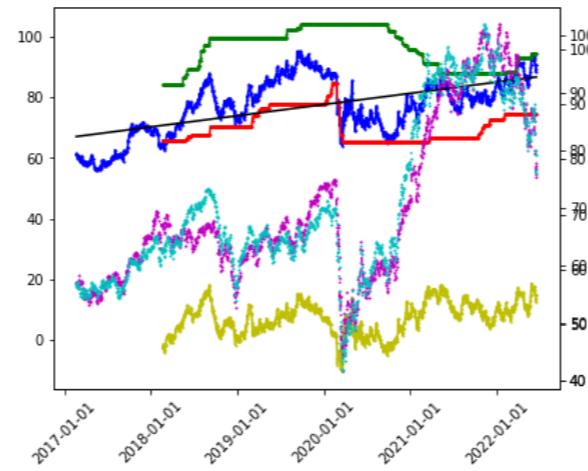
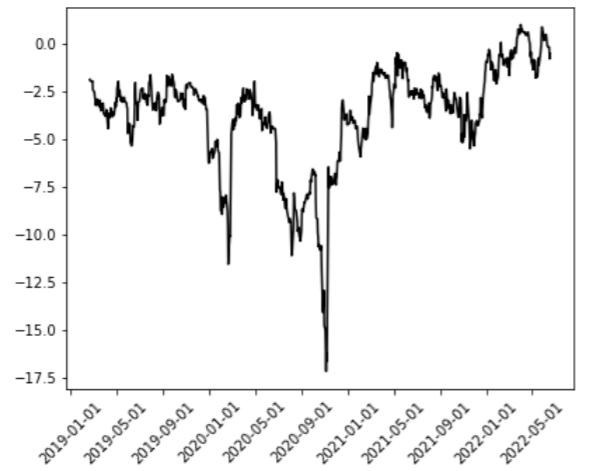
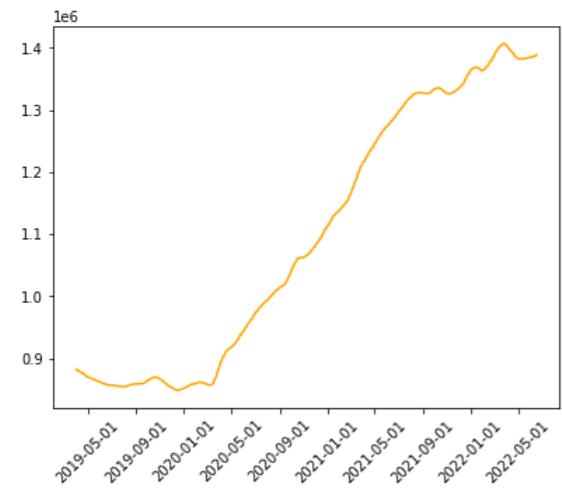
Adj Close  21dBOLD  21dMA-TP  21dBOLU  90dSMA  90dSDev  90d_lower  90d_upper
2022-06-17  89.279999  86.491894  90.865079  95.238265  89.492857  2.644866  84.203125  94.782589

```

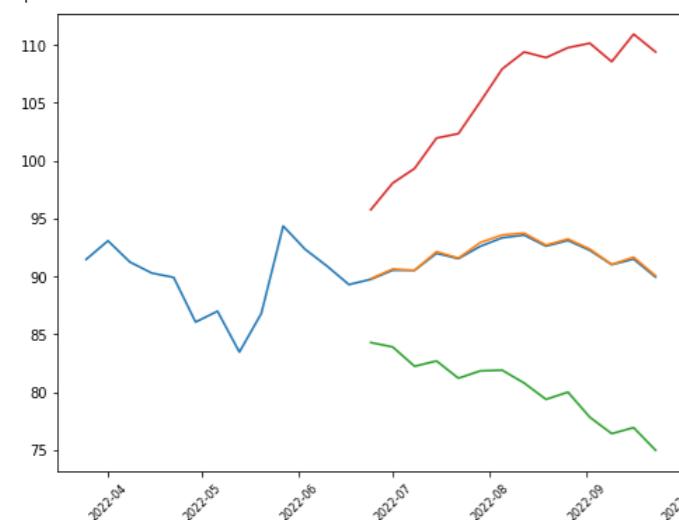
	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
SAFT	1.224409	89.279999	1389322.851562	0.813017	0.269829	0.424873

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Sector 1YMF: -72.2699966430664
Sector Volume Factor: 1.2707168073107045
Sector Risk Trend Factor: -4.617890709055871
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592



ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['mul', 'add', True]
best inner cv score, sdev (11 folds): 47.8101573631191 50.640015715551954
test cv mean error, stdev (10 folds): 51.985035968313674 51.275015122121
sell date: 2022-08-12
expected return: 0.04790972663464705
discounted return: 0.0009003559134399541
quarter return: 1.0863196084034843



```
[{'quarterly_balance_sheet', 2021-12-31 2021-09-30 2021-06-30 \
Intangible Assets 7.302400e+07 7.644500e+07 7.443200e+07
Capital Surplus 2.160700e+08 2.145760e+08 2.130790e+08
Total Liab 1.190218e+09 1.216651e+09 1.187604e+09
Total Stockholder Equity 9.271730e+08 9.280770e+08 9.202990e+08
Other Current Liab 4.241170e+08 4.368100e+08 4.320800e+08
Total Assets 2.117391e+09 2.144728e+09 2.107903e+09
Common Stock 1.780000e+05 1.780000e+05 1.780000e+05
Other Current Assets 1.163020e+08 1.198060e+08 1.188030e+08
Retained Earnings 8.217430e+08 8.032480e+08 7.919210e+08
Other Liab 4.669800e+07 3.272100e+07 2.428000e+07
Treasury Stock -1.108180e+08 -8.992500e+07 -8.487900e+07
Other Assets 2.746100e+07 5.027100e+07 5.177200e+07
Cash 6.360300e+07 4.470300e+07 8.236400e+07
Total Current Liabilities 1.091144e+09 1.127828e+09 1.107200e+09
Other Stockholder Equity 2.457900e+07 3.390900e+07 3.895500e+07
Property Plant Equipment 5.055700e+07 2.731300e+07 2.857300e+07
Total Current Assets 3.952140e+08 3.943510e+08 4.317520e+08
Long Term Investments 1.571135e+09 1.596348e+09 1.521374e+09
Net Tangible Assets 9.271730e+08 9.280770e+08 9.202990e+08
Net Receivables 2.153090e+08 2.298420e+08 2.305850e+08
Long Term Debt 3.000000e+07 3.000000e+07 3.000000e+07
Accounts Payable 6.622880e+08 6.898070e+08 6.726710e+08
Short Term Investments NaN NaN NaN

2021-03-31
Intangible Assets 7.230300e+07
Capital Surplus 2.116380e+08
Total Liab 1.155407e+09
Total Stockholder Equity 8.902530e+08
Other Current Liab 4.184420e+08
Total Assets 2.045660e+09
Common Stock 1.780000e+05
Other Current Assets 1.251720e+08
Retained Earnings 7.677440e+08
Other Liab 2.594200e+07
Treasury Stock -8.930700e+07
Other Assets 4.907900e+07
Cash 5.156300e+07
Total Current Liabilities 1.073364e+09
Other Stockholder Equity 3.452700e+07
Property Plant Equipment 2.980100e+07
Total Current Assets 3.889220e+08
Long Term Investments 1.505555e+09
Net Tangible Assets 8.902530e+08
Net Receivables 2.117400e+08
Long Term Debt 3.000000e+07
Accounts Payable 6.512220e+08
Short Term Investments 4.470000e+05 ]

['quarterly_cashflow', 2021-12-31 2021-09-30 2021-06-30 \
Investments 14386000.0 -70860000.0 -3349000.0
Change To Liabilities -8686000.0 13090000.0 27906000.0
Total Cashflows From Investing Activities 13016000.0 -72290000.0 -5901000.0
Total Cash From Financing Activities -24926000.0 -13365000.0 -13365000.0
Change To Operating Activities 4095000.0 11949000.0 6046000.0
Net Income 32049000.0 24820000.0 37667000.0
Change In Cash 18900000.0 -37661000.0 30801000.0
Repurchase Of Stock -11563000.0 -11563000.0 -11563000.0
Total Cash From Operating Activities 30810000.0 47994000.0 50067000.0
Depreciation 1903000.0 1577000.0 1533000.0
Dividends Paid -13363000.0 -13365000.0 -13365000.0
Change To Account Receivables 12821000.0 -552000.0 -12307000.0
Change To Netincome -7221000.0 -568000.0 -9688000.0
Capital Expenditures -1370000.0 -1430000.0 -2552000.0

2021-03-31
Investments 2059000.0
Change To Liabilities -43600000.0
Total Cashflows From Investing Activities -814000.0
Total Cash From Financing Activities -13915000.0
Change To Operating Activities 15448000.0
Net Income 36174000.0
Change In Cash -2206000.0
Repurchase Of Stock -11563000.0
Total Cash From Operating Activities 12523000.0
Depreciation 1883000.0
Dividends Paid -13915000.0
Change To Account Receivables 8232000.0
Change To Netincome -11948000.0
Capital Expenditures -2873000.0 ]

['quarterly_earnings', Revenue Earnings
Quarter
1Q2021 221908000 36174000
2Q2021 222875000 37667000
3Q2021 213708000 24820000
4Q2021 226420000 32049000]
```

```
[ 'quarterly_financials',
Research Development None None None
Effect Of Accounting Charges None None None
Income Before Tax 40358000.0 31157000.0 47495000.0
Minority Interest None None None
Net Income 32049000.0 24820000.0 37667000.0
Selling General Administrative None None None
Gross Profit 40490000.0 31288000.0 47625000.0
Ebit 40490000.0 31288000.0 47625000.0
Operating Income 40490000.0 31288000.0 47625000.0
Other Operating Expenses None None None
Interest Expense -132000.0 -131000.0 -130000.0
Extraordinary Items None None None
Non Recurring None None None
Other Items None None None
Income Tax Expense 8309000.0 6337000.0 9828000.0
Total Revenue 226420000.0 213708000.0 222875000.0
Total Operating Expenses 185930000.0 182420000.0 175250000.0
Cost Of Revenue 185930000.0 182420000.0 175250000.0
Total Other Income Expense Net -132000.0 -131000.0 -130000.0
Discontinued Operations None None None
Net Income From Continuing Ops 32049000.0 24820000.0 37667000.0
Net Income Applicable To Common Shares 33058000.0 24713000.0 37501000.0
```

2021-03-31

```
Research Development None
Effect Of Accounting Charges None
Income Before Tax 45260000.0
Minority Interest None
Net Income 36174000.0
Selling General Administrative None
Gross Profit 45389000.0
Ebit 45389000.0
Operating Income 45389000.0
Other Operating Expenses None
Interest Expense -129000.0
Extraordinary Items None
Non Recurring None
Other Items None
Income Tax Expense 9086000.0
Total Revenue 221908000.0
Total Operating Expenses 176519000.0
Cost Of Revenue 176519000.0
Total Other Income Expense Net -129000.0
Discontinued Operations None
Net Income From Continuing Ops 36174000.0
Net Income Applicable To Common Shares 36011000.0 ]
```

Holder Shares Date Reported \

0	iShares Core S&P Smallcap ETF	1002230	2022-01-30	
1	Vanguard Total Stock Market Index Fund	405774	2021-12-30	
2	Vanguard Small-Cap Index Fund	365625	2021-12-30	
3	iShares Russell 2000 ETF	334305	2022-01-30	
4	iShares S&P Smallcap 600 Value ETF	235343	2022-01-30	
5	Vanguard Small Cap Value Index Fund	227260	2021-12-30	
6	Vanguard Extended Market Index Fund	183794	2021-12-30	
7	Schwab Strategic Tr-Schwab U.S. Dividend Equit...	165034	2022-02-27	
8	SSgA SPDR ETFS Europe I-SPDR S&P Gbl Div Aris...	163308	2022-02-27	
9	iShares Russell 2000 Value ETF	155313	2022-01-30	

% Out	Value
0.0680	82513595
0.0275	34502963
0.0248	31089093
0.0227	27523330
0.0160	19375789
0.0154	19323917
0.0125	15628003
0.0112	13770436
0.0111	13626419
0.0105	12786919

['options', ('2022-08-19',)]

symbol: RRC
sector: Energy
Index: SP400

vol_30d_2yr: 120549255.6640625
Sector 1YMF: -6.6699981689453125
1YMF: -6.6699981689453125

risk trend factor: -0.5642977510548108

	beta	currentRatio	debtToEquity	ebitda	ebitdaMargins	forwardPE	\
RRC	1.988656	0.246	162.685	458860992	0.11425	5.124756	

	freeCashflow	grossMargins	grossProfits	heldPercentInstitutions	\
RRC	838692352	0.57877	1937478000	0.87178	

	industry	marketCap	operatingCashflow	operatingMargins	payoutRatio	\
RRC	Oil & Gas E&P	7092963328	1090109952	0.02264	0	

```

pegRatio priceToBook priceToSalesTrailing12Months profitMargins \
RRC      0.29      3.976706      1.766035      -0.01797

quickRatio returnOnAssets returnOnEquity revenueGrowth revenuePerShare \
RRC      0.238      0.00892      -0.04423      0.637      16.483

sector sharesOutstanding shortRatio totalCash totalCashPerShare \
RRC Energy      269796992      3.45      112931000      0.453

totalDebt totalRevenue
RRC 2603130112 4016321024

Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper
2022-06-17 26.290001 26.463464 32.556032 38.6486 31.029206 2.69788 25.633446 36.424967

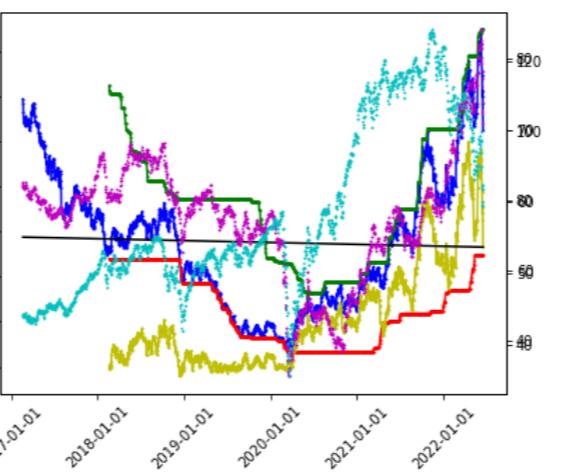
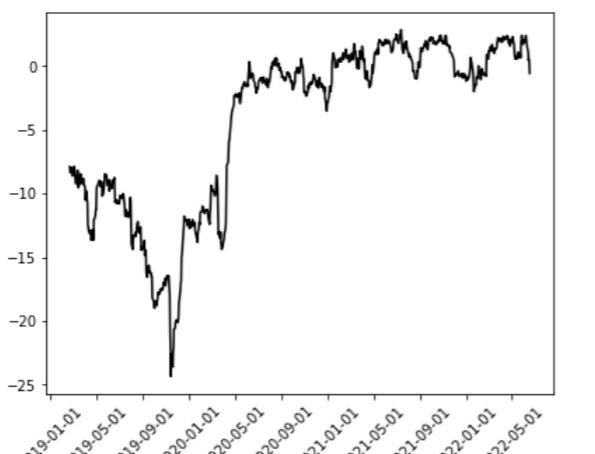
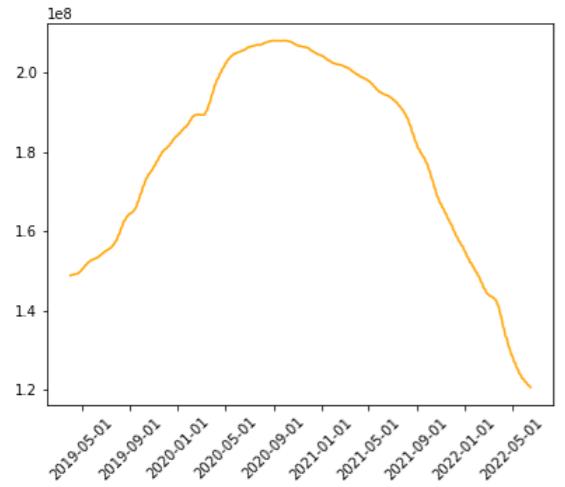
```

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
RRC	0.930726	26.290001	120549255.664062	0.655439	0.472816	0.488191

I axis r axis

legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_lyr		

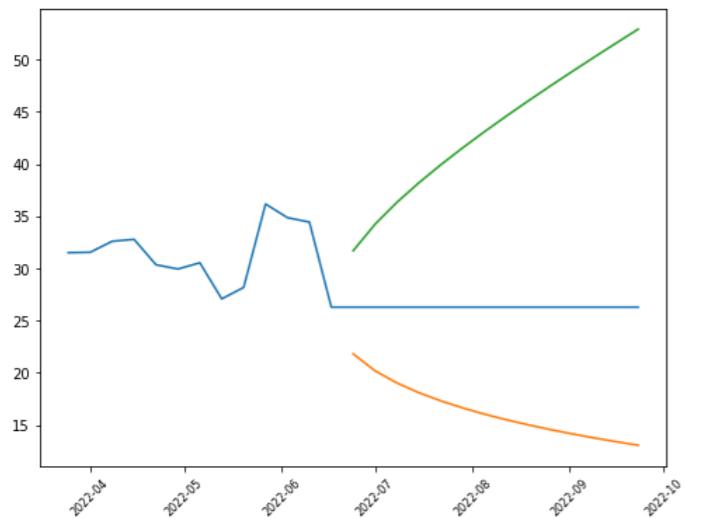
Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -69.05999755859375
Index Volume Factor: 0.5765983741853883
Index Risk Trend Factor: -5.134573474205833



ets next 13 weeks
2022-06-17

2022-06-28

inner cv scores:
best model: [None, None]
best inner cv score, sdev (11 folds): 11.350390166821414 13.920119245774876
test cv mean error, stdev (10 folds): 12.432072852818898 14.151900226937626
sell date: 2022-06-24
expected return: 2.7003482450182074e-05
discounted return: 9.001079797066325e-06
quarter return: 1.0008284385802946



```
['options', ('2023-01-20', '2024-01-19')]
['sustainability',           Value
2022-5
palmOil                  False
controversialWeapons      False
gambling                  False
socialScore                None
nuclear                   False
furLeather                False
alcoholic                 False
gmo                       False
catholic                  False
socialPercentile          None
peerCount                 66
governanceScore           None
environmentPercentile     None
animalTesting              False
tobacco                   False
totalEsg                  33.07
highestControversy         2
esgPerformance            OUT_PERF
coal                      False
pesticides                False
adult                     False
percentile                72.13
peerGroup                 Oil & Gas Producers
smallArms                 False
environmentScore           None
governancePercentile       None
militaryContract          False]
symbol: HES
sector: Energy
Index: SP500
vol_30d_2yr: 48039294.53125
Sector 1YMF: -18.849990844726562
1YMF: -18.849990844726562
risk trend factor: -0.5769815579795349
    beta currentRatio debtToEquity dividendRate dividendYield \
HES  1.670145   1.418    122.347     1.5      0.0146

    earningsGrowth      ebitda ebitdaMargins forwardPE freeCashflow \
HES      0.634  3804000000     0.49454  9.368695  1165250048

    grossMargins grossProfits heldPercentInstitutions industry \
HES      0.71425  5267000000     0.85667  Oil & Gas E&P

    marketCap operatingCashflow operatingMargins payoutRatio pegRatio \
HES  33535475712   2143000064     0.3007     0.4828     0.18

    priceToBook priceToSalesTrailing12Months profitMargins quickRatio \
HES      5.288631     4.359786     0.09412     1.257

    returnOnAssets returnOnEquity revenueGrowth revenuePerShare sector \
HES      0.07461     0.1547      0.21        24.96  Energy

    sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
HES  311263008     2.98  1370000000     4.424  8622999552

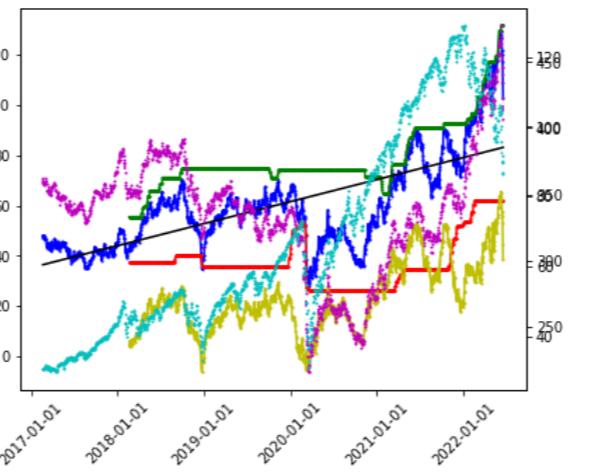
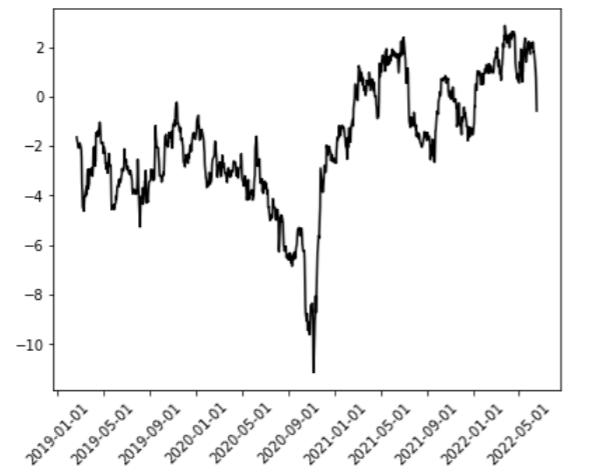
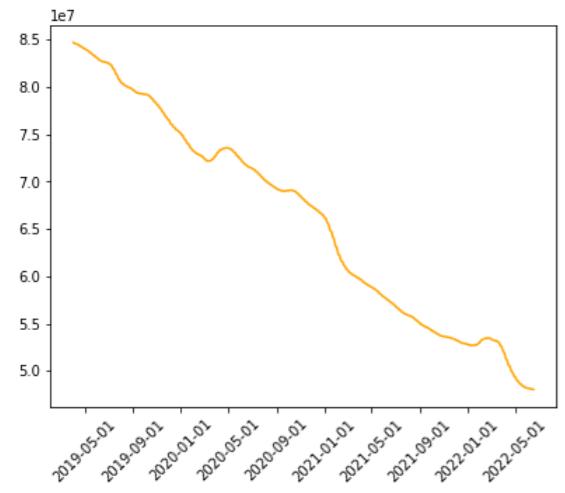
    totalRevenue trailingPE
HES  7692000256    46.161095
```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	102.870003	107.522864	120.951428	134.379992	113.081428	7.84924	97.382949	128.779908

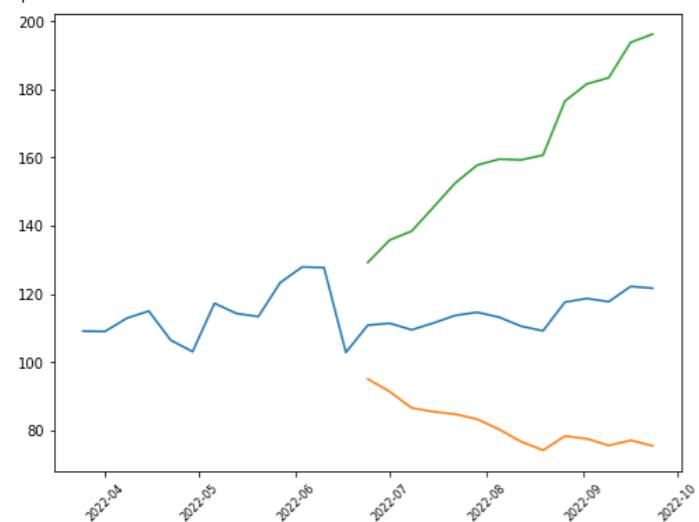
	volume_factor	latest_p	vol_30d_2yr	pct.2yr	adf	hurst
HES	1.067832	102.870003	48039294.53125	0.704306	0.762574	0.442601

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -287.8400573738469
Index Volume Factor: 1.1835166983613057
Index Risk Trend Factor: -3.791860877423899



ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'add', False]
best inner cv score, sdev (11 folds): 184.0530515063362 131.95907753379447
test cv mean error, stdev (10 folds): 199.07108097023448 129.12625342692718
sell date: 2022-09-16
expected return: 0.18785558419968673
discounted return: 0.0019806906069381736
quarter return: 1.19966614976527



```

['options', ('2022-08-19', '2023-01-20', '2024-01-19')]
['sustainability',                                     Value
2022-5
palmoil          False
controversialWeapons  False
gambling          False
socialScore        6.36
nuclear           False
furLeather        False
alcoholic          False
gmo                False
catholic           False
socialPercentile  None
peerCount          66
governanceScore   6.97
environmentPercentile  None
animalTesting     False
tobacco            False
totalEsg           31.78
highestControversy 2
esgPerformance    OUT_PERF
coal               False
pesticides         False
adult              False
percentile         68.13
peerGroup          Oil & Gas Producers
smallArms          False
environmentScore   18.44
governancePercentile  None
militaryContract  False]
symbol: VRTX
sector: Healthcare
Index: SP500
vol_30d_2yr: 38800428.125
Sector 1YMF: -30.810012817382812
1YMF: -30.810012817382812
risk trend factor: -0.6309648097901237
    beta currentRatio debtToEquity earningsGrowth      ebitda \
VRTX  0.549001      4.752      7.999      0.189  3061199872

ebitdaMargins  forwardPE freeCashflow grossMargins grossProfits \
VRTX  0.38517  17.509398  1882163968      0.4956  3619100000

heldPercentInstitutions  industry  marketCap operatingCashflow \
VRTX  0.94064  Biotechnology  69097603072      2678700032

operatingMargins payoutRatio pegRatio priceToBook \
VRTX  0.36848      0      1.59  6.330725

priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
VRTX  8.694147      0.30841      4.372      0.13881

returnOnEquity revenueGrowth revenuePerShare      sector \
VRTX  0.2465      0.216      30.97  Healthcare

sharesOutstanding shortRatio  totalCash totalCashPerShare  totalDebt \
VRTX  255756000      2.03  8238099968      32.211  872499968

totalRevenue trailingPE
VRTX  7947599872  28.513985

Adj Close  21dBOLD  21dMA-TP  21dBOLU  90dSMA  90dSD  90d_lower  90d_upper

```

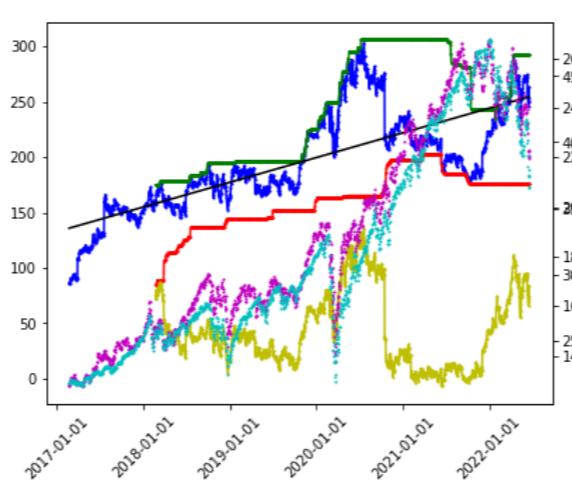
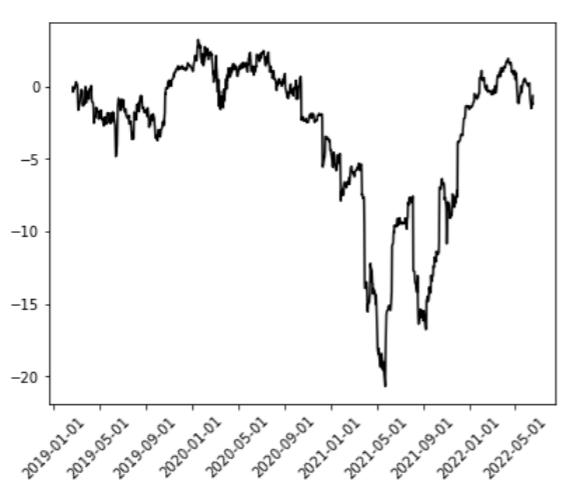
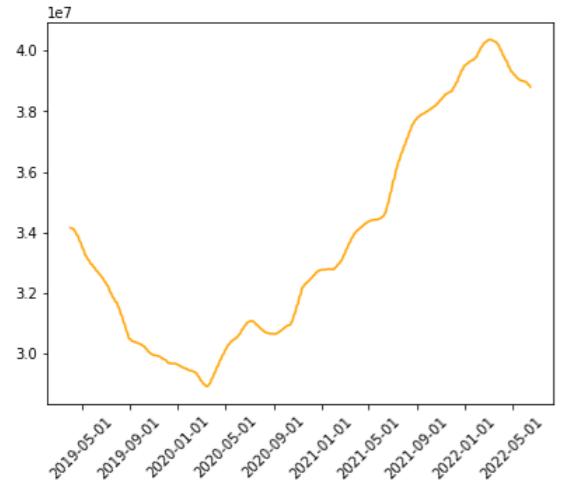
2022-06-17 263.089996 245.480961 263.090794 280.700626 264.090635 12.86454 238.361554 289.819715

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst	
VRTX	0.879467	263.089996	38800428.125	0.668594	0.264015	0.438798

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

6/22/22, 7:59 AM

Sector 1YMF: -122.20997619628906
Sector Volume Factor: 1.2238851152317325
Sector Risk Trend Factor: -3.3236323632363236
Index 1YMF: -287.8400573738469
Index Volume Factor: 1.1835166983613057
Index Risk Trend Factor: -3.791860877423899



ets next 13 weeks

2022-06-17

2022-06-28

inner cv scores:

best model: [None, 'mul', False]

best inner cv score, sdev (11 folds): 1124.977474329419 1540.4240793387437

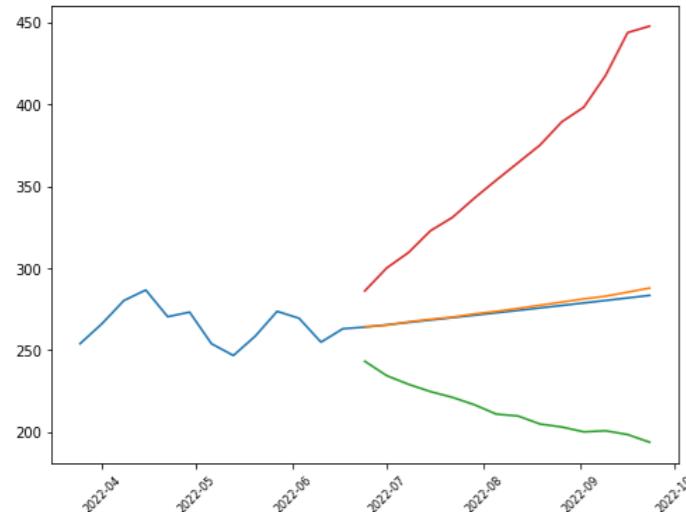
test cv mean error, stdev (10 folds): 1046.6925873956766 1594.6105446745732

sell date: 2022-09-23

expected return: 0.07729698315028159

discounted return: 0.0007923894187280567

quarter return: 1.0755917327908011



```

['options', ('2022-07-15', '2022-09-16', '2023-01-20', '2024-01-19', '2026-03-20')]
['sustainability',                                     Value
2022-5
palmoil          False
controversialWeapons  False
gambling          False
socialScore        15.22
nuclear            False
furLeather         False
alcoholic          False
gmo                False
catholic           True
socialPercentile   None
peerCount          83
governanceScore    7.4
environmentPercentile  None
animalTesting      True
tobacco             False
totalEsg            23.33
highestControversy 2
esgPerformance     AVG_PERF
coal               False
pesticides          False
adult               False
percentile          36.46
peerGroup           Pharmaceuticals
smallArms           False
environmentScore    0.71
governancePercentile  None
militaryContract   False]
symbol: HALO
sector: Healthcare
Index: SP400
vol_30d_2yr: 23895179.6875
Sector 1YMF: -7.439998626708984
1YMF: -7.439998626708984
risk trend factor: -0.6397246726921165
    beta currentRatio debtToEquity earningsGrowth ebitda \
HALO 1.317156      7.907      446.55      -0.093  277299008

    ebitdaMargins forwardPE freeCashflow grossMargins grossProfits \
HALO 0.62552 17.074625 197384992 0.73588 326225000

    heldPercentInstitutions industry marketCap operatingCashflow \
HALO 0.9669 Biotechnology 6442413056 299440000

    operatingMargins payoutRatio pegRatio priceToBook \
HALO 0.62237 0 0.92 22.891445

    priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
HALO 14.532523 0.90842 7.101 0.20475

    returnOnEquity revenueGrowth revenuePerShare sector \
HALO 2.31442 -0.162 3.152 Healthcare

    sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
HALO 140787008 8.67 740921984 5.381 879494016

    totalRevenue trailingPE
HALO 443310016 16.454514

Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSD 90d_lower 90d_upper
2022-06-17 44.139999 42.492536 44.943651 47.394766 42.266984 2.620388 37.026208 47.50776

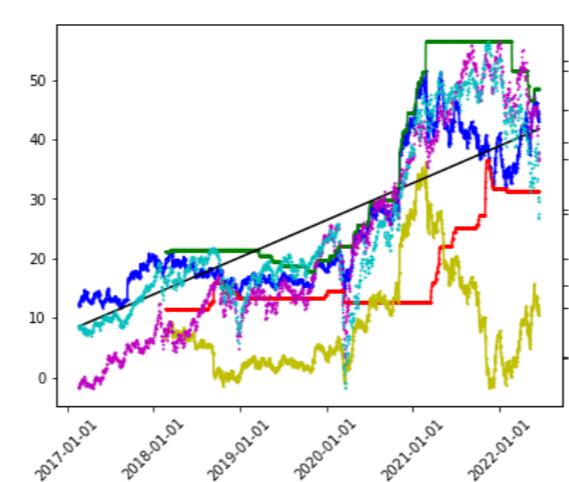
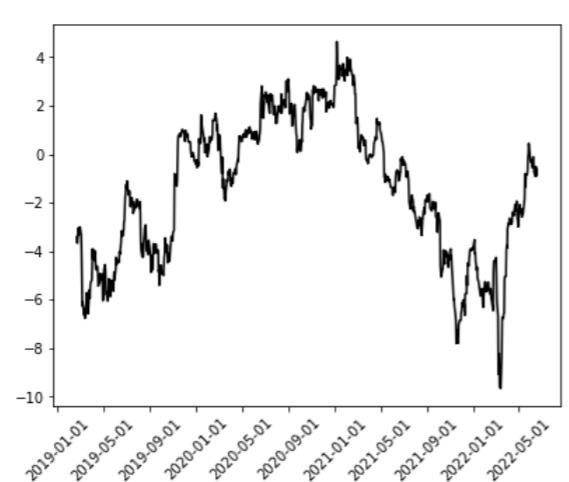
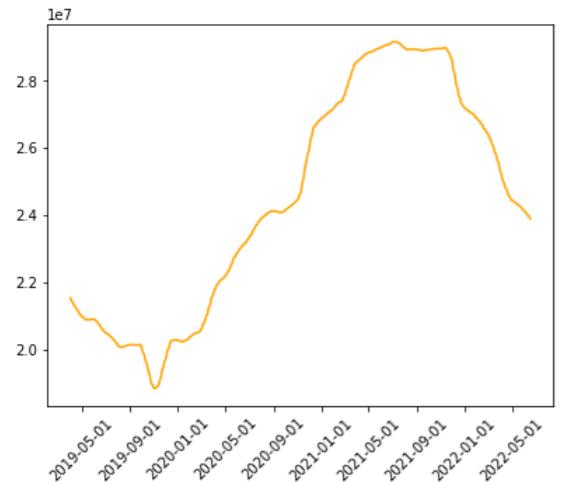
```

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst	
HALO	0.928279	44.139999	23895179.6875	0.628597	0.811654	0.443799

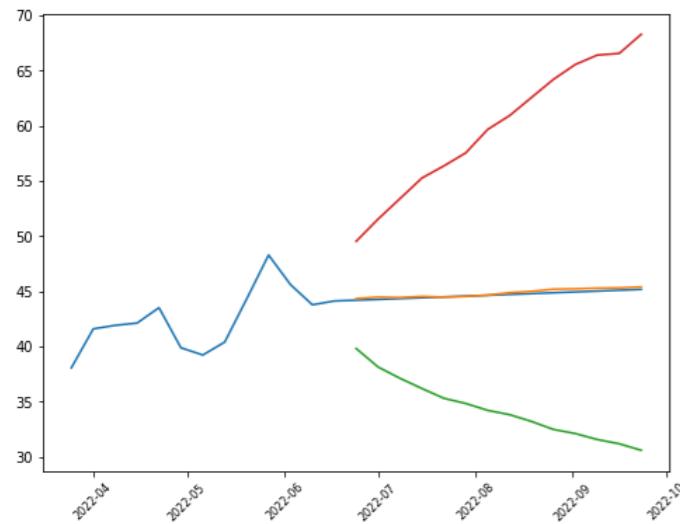
l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

6/22/22, 7:59 AM

Sector 1YMF: -122.20997619628906
Sector Volume Factor: 1.2238851152317325
Sector Risk Trend Factor: -3.3236323632363236
Index 1YMF: -69.05999755859375
Index Volume Factor: 0.5765983741853883
Index Risk Trend Factor: -5.134573474205833



ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, 'mul', False]
best inner cv score, sdev (11 folds): 24.15045102354766 24.173104028292965
test cv mean error, stdev (10 folds): 26.226304209301514 24.400247241995316
sell date: 2022-09-23
expected return: 0.02376342898228762
discounted return: 0.0002498766771914518
quarter return: 1.0232519914770084



```
[{'quarterly_balance_sheet': 2021-12-31 2021-09-30 2021-06-30 \
    Capital Surplus 2.563470e+08 4.072290e+08 4.618970e+08
    Total Liab 9.074760e+08 9.037460e+08 9.061150e+08
    Total Stockholder Equity 1.969530e+08 2.816740e+08 1.197480e+08
    Other Current Liab 1.746000e+06 2.245000e+06 1.247000e+06
    Total Assets 1.104429e+09 1.185420e+09 1.025863e+09
    Common Stock 1.380000e+05 1.410000e+05 1.420000e+05
    Retained Earnings -5.891200e+07 -1.256820e+08 -3.422670e+08
    Other Liab 2.965000e+06 2.530000e+06 4.026000e+06
    Treasury Stock -6.200000e+05 -1.400000e+04 -2.400000e+04
    Other Assets 1.693480e+08 1.585330e+08 1.598100e+07
    Cash 1.187190e+08 4.916830e+08 4.469660e+08
    Total Current Liabilities 1.171470e+08 1.131530e+08 1.142510e+08
    Deferred Long Term Asset Charges 1.554340e+08 1.424810e+08 NaN
    Short Long Term Debt 8.941900e+07 8.925100e+07 8.916700e+07
    Other Stockholder Equity -6.200000e+05 -1.400000e+04 -2.400000e+04
    Property Plant Equipment 8.794000e+06 9.588000e+06 1.013200e+07
    Total Current Assets 9.262870e+08 1.017299e+09 9.997500e+08
    Net Tangible Assets 1.969530e+08 2.816740e+08 1.197480e+08
    Short Term Investments 6.222030e+08 3.242370e+08 3.083430e+08
    Net Receivables 9.097500e+07 1.120990e+08 1.531960e+08
    Long Term Debt 7.872550e+08 7.864540e+08 7.855710e+08
    Inventory 5.390800e+07 5.597800e+07 5.855400e+07
    Accounts Payable 1.541000e+06 3.322000e+06 4.563000e+06

    2021-03-31
    Capital Surplus 501186000.0
    Total Liab 898987000.0
    Total Stockholder Equity 67595000.0
    Other Current Liab 1746000.0
    Total Assets 966582000.0
    Common Stock 143000.0
    Retained Earnings -433725000.0
    Other Liab 4337000.0
    Treasury Stock -9000.0
    Other Assets 14497000.0
    Cash 499450000.0
    Total Current Liabilities 107421000.0
    Deferred Long Term Asset Charges NaN
    Short Long Term Debt 89042000.0
    Other Stockholder Equity -9000.0
    Property Plant Equipment 10366000.0
    Total Current Assets 941719000.0
    Net Tangible Assets 67595000.0
    Short Term Investments 264856000.0
    Net Receivables 88391000.0
    Long Term Debt 784731000.0
    Inventory 58343000.0
    Accounts Payable 535000.0 ]
['quarterly_cashflow', 2021-12-31 2021-09-30 \
    Investments -299311000.0 -16458000.0
    Change To Liabilities 3473000.0 -2513000.0
    Total Cashflows From Investing Activities -299469000.0 -16954000.0
    Total Cash From Financing Activities -156011000.0 -60068000.0
    Change To Operating Activities -5042000.0 -682000.0
    Issuance Of Stock 4310000.0 4648000.0
    Net Income 66770000.0 216587000.0
    Change In Cash -372964000.0 44717000.0
    Repurchase Of Stock -160321000.0 -64716000.0
    Total Cash From Operating Activities 82516000.0 121739000.0
    Depreciation 773000.0 751000.0
    Change To Inventory 2219000.0 2725000.0
    Change To Account Receivables 21124000.0 41097000.0
    Change To Netincome -7769000.0 -137194000.0
    Capital Expenditures -158000.0 -496000.0
    Other Cashflows From Financing Activities NaN NaN
    Net Borrowings NaN NaN

    2021-06-30 2021-03-31
    Investments -44083000.0 -44980000.0
    Change To Liabilities 6833000.0 -6626000.0
    Total Cashflows From Investing Activities -44616000.0 -45250000.0
    Total Cash From Financing Activities -44757000.0 338701000.0
    Change To Operating Activities -3496000.0 -2335000.0
    Issuance Of Stock 3578000.0 3578000.0
    Net Income 91458000.0 27895000.0
    Change In Cash -52484000.0 351747000.0
    Repurchase Of Stock -4824000.0 -76781000.0
    Total Cash From Operating Activities 36889000.0 58296000.0
    Depreciation 735000.0 738000.0
    Change To Inventory -86000.0 2513000.0
    Change To Account Receivables -64805000.0 9339000.0
    Change To Netincome 5285000.0 26031000.0
    Capital Expenditures -533000.0 -270000.0
    Other Cashflows From Financing Activities -95000.0 -329000.0
    Net Borrowings NaN 415811000.0 ]
```

```
[{'quarterly_earnings': Revenue Earnings
Quarter
1Q2021 89022000 27895000
2Q2021 136455000 91458000
3Q2021 115830000 216587000
4Q2021 102003000 66770000}]
[{'quarterly_financials': 2021-12-31 2021-09-30 2021-06-30 \
Research Development None None None
Effect Of Accounting Charges None None None
Income Before Tax 54810000.0 74106000.0 91516000.0
Minority Interest None None None
Net Income 66770000.0 216587000.0 91458000.0
Selling General Administrative 13774000.0 13169000.0 12321000.0
Gross Profit 70308000.0 88755000.0 105368000.0
Ebit 56534000.0 75586000.0 93047000.0
Operating Income 56534000.0 75586000.0 93047000.0
Other Operating Expenses None None None
Interest Expense -2055000.0 -1754000.0 -1752000.0
Extraordinary Items None None None
Non Recurring None None None
Other Items None None None
Income Tax Expense -11960000.0 -142481000.0 58000.0
Total Revenue 102003000.0 115830000.0 136455000.0
Total Operating Expenses 45469000.0 40244000.0 43488000.0
Cost Of Revenue 31695000.0 27075000.0 31087000.0
Total Other Income Expense Net -1724000.0 -1480000.0 -1531000.0
Discontinued Operations None None None
Net Income From Continuing Ops 66770000.0 216587000.0 91458000.0
Net Income Applicable To Common Shares 66770000.0 216587000.0 91458000.0}
```

```
2021-03-31
Research Development None
Effect Of Accounting Charges None
Income Before Tax 28086000.0
Minority Interest None
Net Income 27895000.0
Selling General Administrative 11059000.0
Gross Profit 61794000.0
Ebit 50735000.0
Operating Income 50735000.0
Other Operating Expenses None
Interest Expense -1965000.0
Extraordinary Items None
Non Recurring None
Other Items None
Income Tax Expense 191000.0
Total Revenue 89022000.0
Total Operating Expenses 38287000.0
Cost Of Revenue 27228000.0
Total Other Income Expense Net -22649000.0
Discontinued Operations None
Net Income From Continuing Ops 27895000.0
Net Income Applicable To Common Shares 27895000.0 ]
```

```
[{'mutualfund_holders': Holder Shares Date Reported \
0 Artisan Small Cap Fund 4559968 2021-12-30
1 Vanguard Total Stock Market Index Fund 4001847 2021-12-30
2 iShares Core S&P Midcap ETF 3916016 2022-01-30
3 Vanguard Small-Cap Index Fund 3542071 2021-12-30
4 iShares Russell 2000 ETF 3147979 2022-01-30
5 Vanguard Small-Cap Growth Index Fund 2205668 2021-12-30
6 JP Morgan Small Cap Growth Fund 2045628 2021-12-30
7 Vanguard Extended Market Index Fund 1844833 2021-12-30
8 SPDR (R) Ser Tr-SPDR (R) S&P (R) Biotech ETF 1788558 2022-01-30
9 Delaware Group Equity Fds V-Small Cap Core Fund 1749009 2022-02-27}
```

```
% Out Value
0 0.0331 183356313
1 0.0290 160914267
2 0.0284 135533313
3 0.0257 142426674
4 0.0228 108951553
5 0.0160 88689910
6 0.0148 82254701
7 0.0134 74180734
8 0.0130 61901992
9 0.0127 62037349 ]
```

```
['options', ('2023-01-20',)]
symbol: CSL
sector: error
sector: error
Index: SP400
vol_30d_2yr: 6905512.5
Sector 1YMF: -29.350021362304688
1YMF: -29.350021362304688
risk trend factor: -0.659254684314124
Empty DataFrame
```

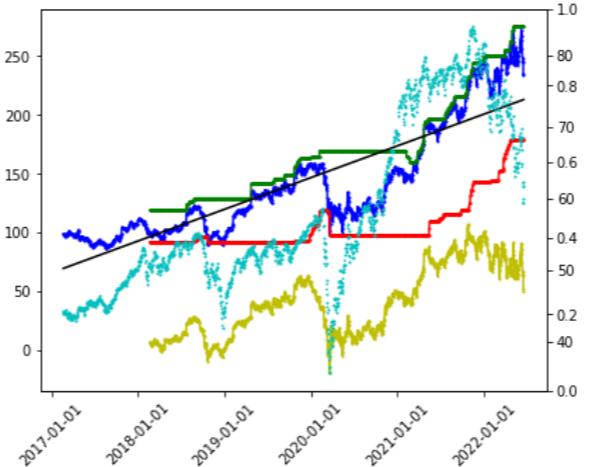
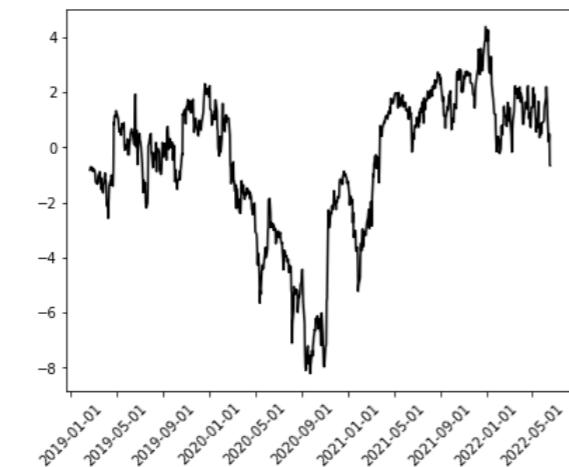
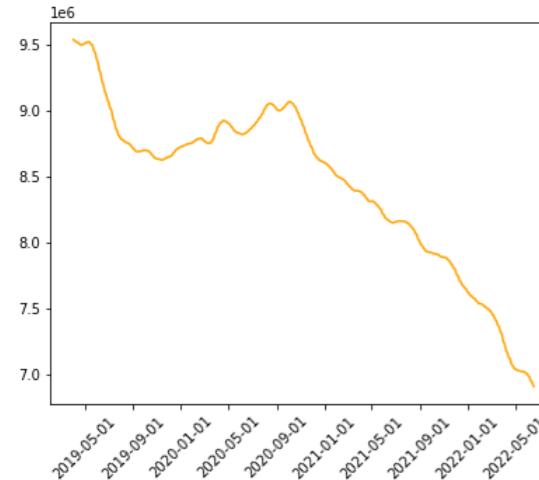
Columns: []
Index: [CSL]

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	234.559998	232.555741	252.299205	272.042669	250.260634	9.078125	232.104383	268.416885

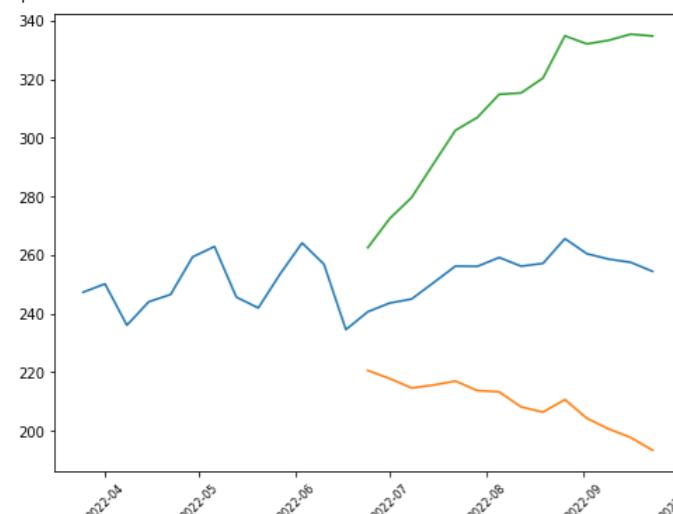
	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
CSL	0.893561	234.559998	6905512.5	0.754731	0.961206	0.453537

I axis	r axis
legend	legend
blue symbol	magenta sector
green trailing_1yr_max	cyan index
red trailing_1yr_min	
orange 30d_vol_2yr	
black risk_trend_factor/linear	
yellow supply_trend_1yr	

Index 1YMF: -69.05999755859375
Index Volume Factor: 0.5765983741853883
Index Risk Trend Factor: -5.134573474205833



ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'add', False]
best inner cv score, sdev (11 folds): 497.44210311419135 367.56321843453946
test cv mean error, stdev (10 folds): 491.75238336768535 385.04157563310724
sell date: 2022-08-26
expected return: 0.13233119987916436
discounted return: 0.001884781796564594
quarter return: 1.1891475665568259



```

symbol: NFG
sector: Energy
Index: SP400
vol_30d_2yr: 10051408.984375
Sector 1YMF: -7.5399932861328125
1YMF: -7.5399932861328125
risk trend factor: -0.6904756914314619
    beta currentRatio debtToEquity dividendRate dividendYield \
NFG 0.65625      0.335     153.726      1.82      0.0245

    earningsGrowth      ebitda ebitdaMargins forwardPE freeCashflow \
NFG      0.48   1072884992      0.5368   10.970457   493999136

    grossMargins grossProfits heldPercentInstitutions      industry \
NFG      0.59349   1095026000      0.77105  Oil & Gas Integrated

    marketCap operatingCashflow operatingMargins payoutRatio pegRatio \
NFG 6792414208      800038976      0.36285      0.3534      1.31

    priceToBook priceToSalesTrailing12Months profitMargins quickRatio \
NFG 3.644438      3.398482      0.23674      0.222

    returnOnAssets returnOnEquity revenueGrowth revenuePerShare sector \
NFG 0.06076      0.23881      0.273      21.899  Energy

    sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
NFG 91455696      4.03   52569000      0.575   2864929024

    totalRevenue trailingPE
NFG 1998660992      14.41576

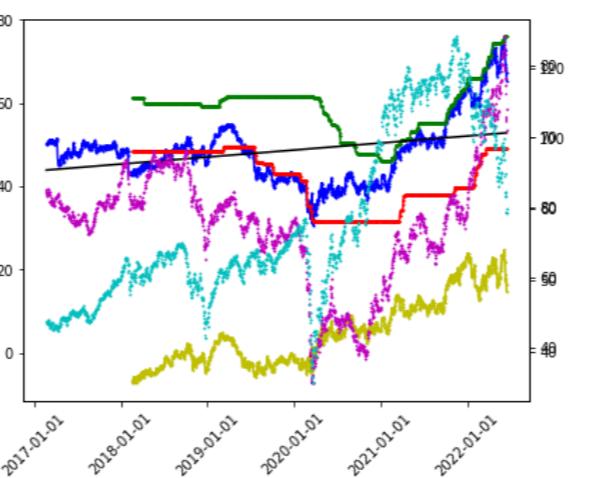
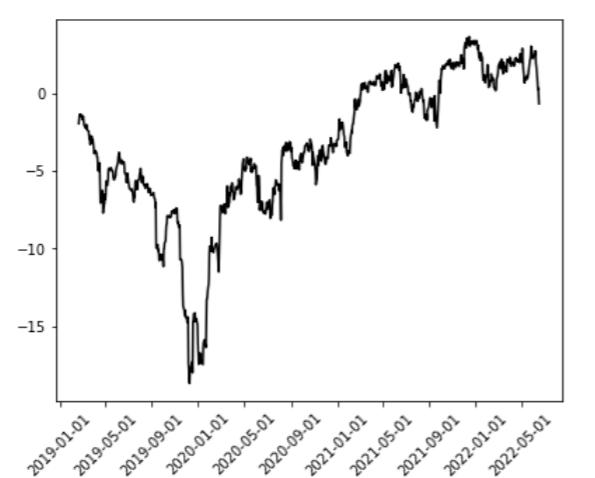
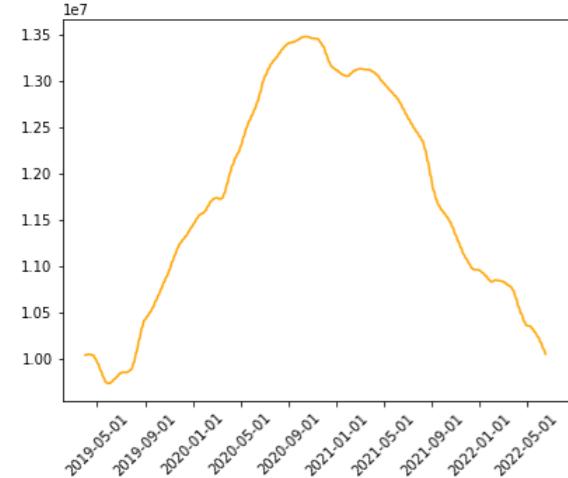
```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	65.440002	66.196732	71.468095	76.739458	70.233492	2.539221	65.155049	75.311934

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst	
NFG	1.09896	65.440002	10051408.984375	0.723622	0.865522	0.460844

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

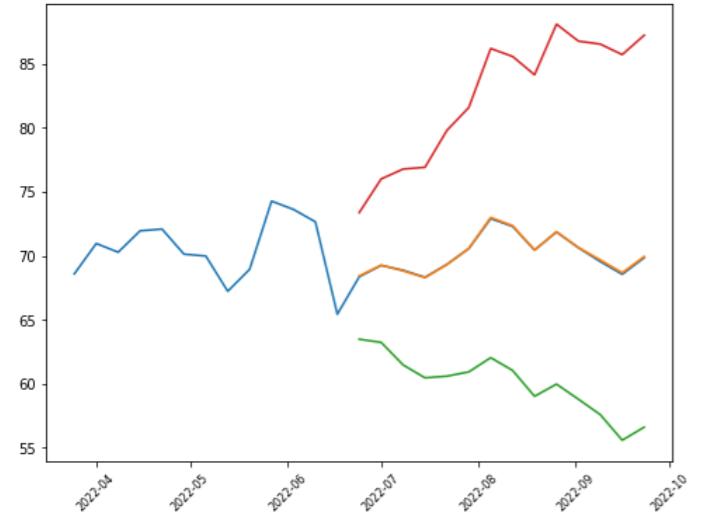
Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -69.05999755859375
Index Volume Factor: 0.5765983741853883
Index Risk Trend Factor: -5.134573474205833



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['mul', 'mul', False]
best inner cv score, sdev (11 folds): 18.324751022896383 15.305701409078265
test cv mean error, stdev (10 folds): 19.906571799109706 15.171302246599126
sell date: 2022-08-05
expected return: 0.11401440923268055
discounted return: 0.0024022157322063364
quarter return: 1.2469976999759442

```



```

['options', ('2022-07-15',)]
symbol: CAL
sector: Consumer Cyclical
Index: SP600
vol_30d_2yr: 13624561.71875
Sector 1YMF: -7.140003204345703
1YMF: -7.140003204345703
risk trend factor: -0.6945527944974851
    beta currentRatio debtToEquity dividendRate dividendYield \
CAL 2.094642      0.873     244.795      0.28      0.0094

earningsGrowth      ebitda ebitdaMargins forwardPE freeCashflow \
CAL      7.25 304267264      0.10587   6.081197  54009248

grossMargins grossProfits heldPercentInstitutions      industry \
CAL 0.44516 1227317000      0.91787  Footwear & Accessories

marketCap operatingCashflow operatingMargins payoutRatio pegRatio \
CAL 1080626176      117749000      0.08979     0.0593     0.42

priceToBook priceToSalesTrailing12Months profitMargins quickRatio \
CAL 2.925576          0.37599      0.06311      0.201

returnOnAssets returnOnEquity revenueGrowth revenuePerShare \
CAL 0.08646      0.64377      0.151      78.491

sector sharesOutstanding shortRatio totalCash \
CAL Consumer Cyclical 37970000      5.05 33717000

totalCashPerShare totalDebt totalRevenue trailingPE
CAL 0.931 876433984 2874084096 6.039898

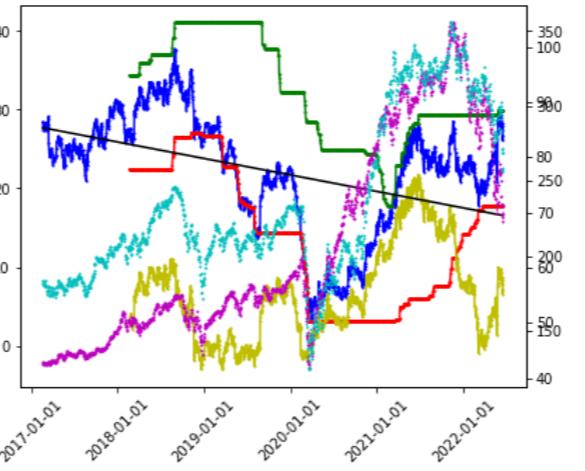
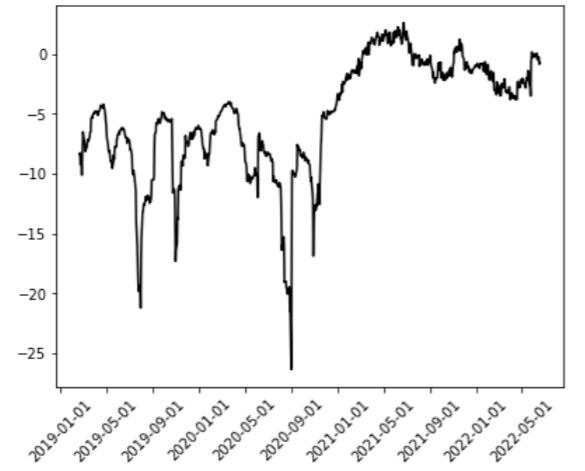
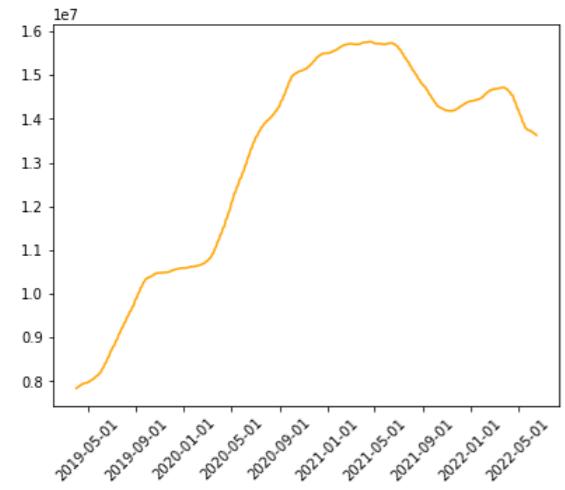
Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper
2022-06-17 26.639999 22.439922 26.988988 31.538054 23.684434 3.140914 17.402605 29.966263

```

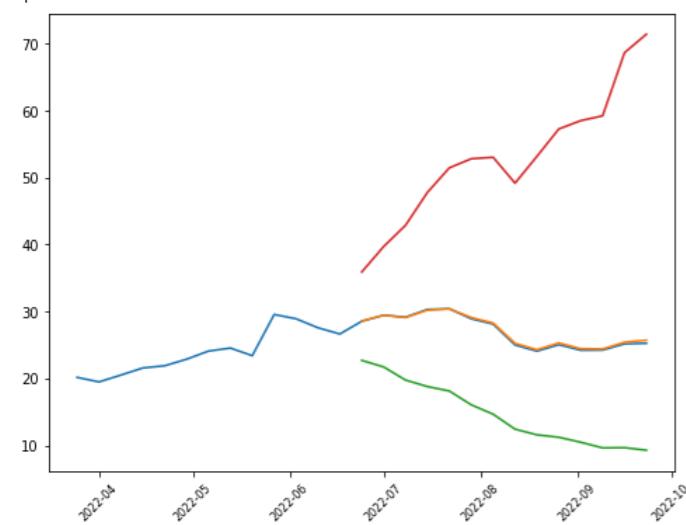
	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
CAL	1.602114	26.639999	13624561.71875	0.862213	0.419124	0.505546

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Sector 1YMF: -359.96002197265625
Sector Volume Factor: 1.2928194874233667
Sector Risk Trend Factor: -4.72140697901556
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592



ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['mul', 'mul', True]
best inner cv score, sdev (11 folds): 17.44976259274631 17.138795077741438
test cv mean error, stdev (10 folds): 18.966261548169626 17.25730788695117
sell date: 2022-07-22
expected return: 0.14165672602882232
discounted return: 0.004282708433753113
quarter return: 1.481667086874155



```
[ 'options', ('2022-08-19', '2022-12-16') ]
symbol: UNM
sector: Financial Services
Index: SP400
vol_30d_2yr: 53508487.6953125
Sector 1YMF: -5.059993743896484
1YMF: -5.059993743896484
risk trend factor: -0.6950538380399589
    beta currentRatio debtToEquity dividendRate dividendYield \
UNM 1.514215      24.407      30.875      1.2      0.0348

earningsGrowth     ebitda ebitdaMargins forwardPE freeCashflow \
UNM      0.179  1461100032      0.12162  6.720238  799987520

grossMargins grossProfits heldPercentInstitutions      industry \
UNM      0.27461  3299100000      0.88459  Insurance--Life

marketCap operatingCashflow operatingMargins payoutRatio pegRatio \
UNM 6924822528      1387500032      0.11165      0.2622      0.65

priceToBook priceToSalesTrailing12Months profitMargins quickRatio \
UNM      0.62269      0.576406      0.0686      5.019

returnOnAssets returnOnEquity revenueGrowth revenuePerShare \
UNM      0.01191      0.07396      -0.303      58.824

sector sharesOutstanding shortRatio      totalCash \
UNM  Financial Services      204452992      2.79  1463000064

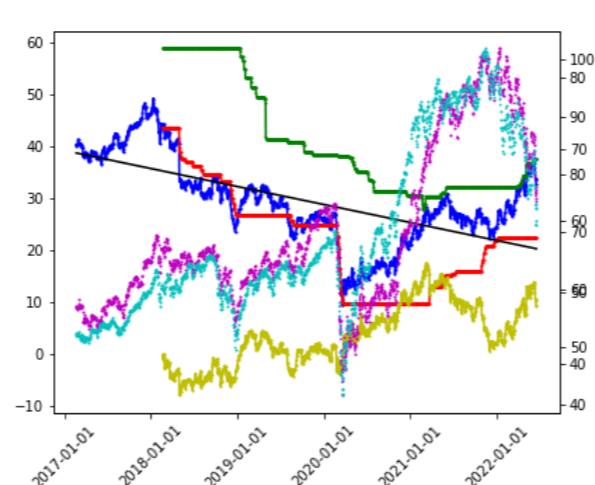
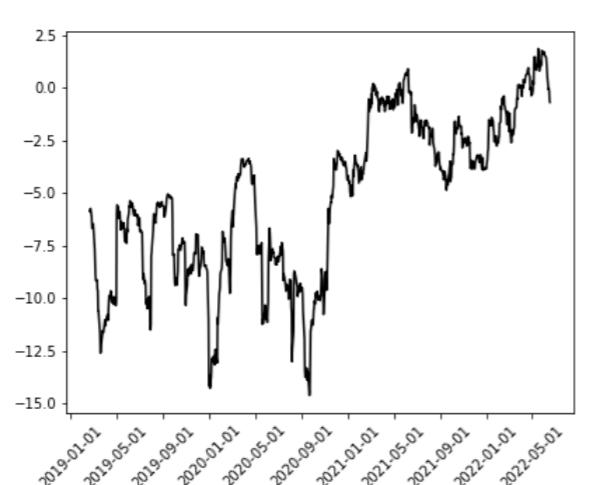
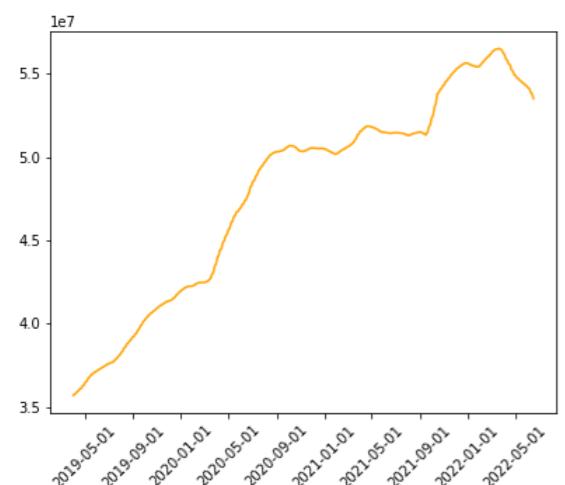
totalCashPerShare      totalDebt totalRevenue trailingPE
UNM      7.222  3524800000  12013800448      8.680163
```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_lower	90d_upper
2022-06-17	32.560001	32.487871	35.250159	38.012447	33.449206	2.08965	29.269907	37.628506

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst	
UNM	0.872299	32.560001	53508487.695312	0.778725	0.43303	0.490172

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

Sector 1YMF: -72.2699966430664
Sector Volume Factor: 1.2707168073107045
Sector Risk Trend Factor: -4.617890709055871
Index 1YMF: -69.05999755859375
Index Volume Factor: 0.5765983741853883
Index Risk Trend Factor: -5.134573474205833



```
ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: ['add', 'add', True]
best inner cv score, sdev (11 folds): 20.100653539102222 26.485584963928066
test cv mean error, stdev (10 folds): 21.693368025080964 27.271432900194995
sell date: 2022-07-22
expected return: 0.047464583079583816
discounted return: 0.001497008475643824
quarter return: 1.1475414622098499
```



```
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Intangible Assets 2.281000e+09 2.231500e+09 2.235700e+09
Capital Surplus 2.408100e+09 2.398500e+09 2.386800e+09
Total Liab 5.869920e+10 5.947970e+10 5.986400e+10
Total Stockholder Equity 1.141640e+10 1.111820e+10 1.094750e+10
Other Current Liab 5.717000e+08 5.090000e+08 5.957000e+08
Total Assets 7.011560e+10 7.059790e+10 7.080790e+10
Common Stock 3.070000e+07 3.070000e+07 3.070000e+07
Other Current Assets 1.152200e+10 1.170400e+10 1.202560e+10
Retained Earnings 1.185320e+10 1.175480e+10 1.148760e+10
Other Liab 5.460270e+10 5.552930e+10 5.582330e+10
Good Will 3.522000e+08 3.521000e+08 3.533000e+08
Treasury Stock -2.875600e+09 -3.065800e+09 -2.957600e+09
Other Assets 7.966200e+09 7.985200e+09 7.792900e+09
Cash 7.500000e+07 1.217000e+08 1.231000e+08
Total Current Liabilities 5.943000e+08 5.090000e+08 5.957000e+08
Other Stockholder Equity 3.541000e+08 1.139000e+08 2.221000e+08
Property Plant Equipment 5.118000e+08 4.625000e+08 4.998000e+08
Total Current Assets 1.450490e+10 1.484430e+10 1.537290e+10
Long Term Investments 4.449950e+10 4.472230e+10 4.455330e+10
Net Tangible Assets 1.106420e+10 1.076610e+10 1.059420e+10
Short Term Investments 1.388000e+09 1.472700e+09 1.596600e+09
Net Receivables 1.519900e+09 1.545900e+09 1.627600e+09
Long Term Debt 3.442200e+09 3.441400e+09 3.441400e+09

2021-03-31
Intangible Assets 2.254800e+09
Capital Surplus 2.380800e+09
Total Liab 5.868650e+10
Total Stockholder Equity 1.057010e+10
Other Current Liab 5.028000e+08
Total Assets 6.925660e+10
Common Stock 3.070000e+07
Other Current Assets 1.221890e+10
Retained Earnings 1.136320e+10
Other Liab 5.483690e+10
Good Will 3.530000e+08
Treasury Stock -3.204600e+09
Other Assets 7.858300e+09
Cash 5.618000e+08
Total Current Liabilities 5.028000e+08
Other Stockholder Equity -2.490000e+07
Property Plant Equipment 5.006000e+08
Total Current Assets 1.523620e+10
Long Term Investments 4.305370e+10
Net Tangible Assets 1.021710e+10
Short Term Investments 7.561000e+08
Net Receivables 1.699400e+09
Long Term Debt 3.346800e+09 ]
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Investments -306600000.0 -351100000.0
Change To Liabilities 0.0 0.0
Total Cashflows From Investing Activities -434800000.0 -399100000.0
Total Cash From Financing Activities -100000.0 -57400000.0
Change To Operating Activities -47900000.0 -144100000.0
Issuance Of Stock 1500000.0 900000.0
Net Income 159700000.0 328600000.0
Change In Cash -4670000.0 -1400000.0
Repurchase Of Stock -50000000.0 -50000000.0
Total Cash From Operating Activities 388200000.0 455100000.0
Depreciation 29800000.0 30400000.0
Other Cashflows From Investing Activities -100300000.0 -23200000.0
Dividends Paid -61400000.0 -61300000.0
Change To Account Receivables 250800000.0 145700000.0
Other Cashflows From Financing Activities 109800000.0 3000000.0
Change To Netincome -94500000.0 74700000.0
Capital Expenditures -27900000.0 -24800000.0
Net Borrowings NaN NaN

2021-06-30 2021-03-31
Investments -1.125300e+09 603400000.0
Change To Liabilities 0.000000e+00 0.0
Total Cashflows From Investing Activities -1.095300e+09 588600000.0
Total Cash From Financing Activities -4.960000e+07 -61800000.0
Change To Operating Activities 1.010000e+08 254500000.0
Issuance Of Stock 6.000000e+05 800000.0
Net Income 1.829000e+08 153000000.0
Change In Cash -4.387000e+08 364800000.0
Repurchase Of Stock -5.000000e+07 -50000000.0
Total Cash From Operating Activities 7.062000e+08 -162000000.0
Depreciation 3.030000e+07 29300000.0
Other Cashflows From Investing Activities 5.670000e+07 16100000.0
Dividends Paid -5.830000e+07 -58400000.0
Change To Account Receivables 2.770000e+08 4500000.0
Other Cashflows From Financing Activities -8.000000e+07 -4200000.0
Change To Netincome -2.530000e+07 -64820000.0
```

```

Capital Expenditures      -2.670000e+07  -30900000.0
Net Borrowings            8.810000e+07   88100000.0  ]
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Quarter
1Q2021      3072000000  153000000
2Q2021      2993000000  182900000
3Q2021      2969700000  328600000
4Q2021      2979100000  159700000]
['quarterly_financials',
Research Development      None        None
Effect Of Accounting Charges  None        None
Income Before Tax          191700000.0  409900000.0
Minority Interest           None        None
Net Income                 159700000.0  328600000.0
Selling General Administrative 249300000.0  241600000.0
Gross Profit                753400000.0  947700000.0
Ebit                        242300000.0  466700000.0
Operating Income             242300000.0  466700000.0
Other Operating Expenses    261800000.0  239400000.0
Interest Expense             -50600000.0  -44700000.0
Extraordinary Items          None        None
Non Recurring               None        None
Other Items                  None        None
Income Tax Expense           32000000.0   81300000.0
Total Revenue                2979100000.0  2969700000.0
Total Operating Expenses     2736800000.0  2503000000.0
Cost Of Revenue              2225700000.0  2022000000.0
Total Other Income Expense Net  -50600000.0  -56800000.0
Discontinued Operations      None        None
Net Income From Continuing Ops 159700000.0  328600000.0
Net Income Applicable To Common Shares 159700000.0  328600000.0

2021-06-30      2021-03-31
Research Development      None        None
Effect Of Accounting Charges  None        None
Income Before Tax          262600000.0  198800000.0
Minority Interest           None        None
Net Income                 182900000.0  153000000.0
Selling General Administrative 247400000.0  236900000.0
Gross Profit                872900000.0  725100000.0
Ebit                        389100000.0  243200000.0
Operating Income             389100000.0  243200000.0
Other Operating Expenses    236400000.0  245000000.0
Interest Expense             -45300000.0  -44400000.0
Extraordinary Items          None        None
Non Recurring               None        None
Other Items                  None        None
Income Tax Expense           79700000.0   45800000.0
Total Revenue                2993000000.0  3072000000.0
Total Operating Expenses     2603900000.0  2828800000.0
Cost Of Revenue              2120100000.0  2346900000.0
Total Other Income Expense Net  -126500000.0  -44400000.0
Discontinued Operations      None        None
Net Income From Continuing Ops 182900000.0  153000000.0
Net Income Applicable To Common Shares 182900000.0  153000000.0
['mutualfund_holders',
Holder      Shares Date Reported % Out \
0  Fidelity Low-Priced Stock Fund 13985534 2022-02-27 0.0695
1  iShares Core S&P Midcap ETF 5665789 2022-01-30 0.0282
2  Vanguard Total Stock Market Index Fund 5233494 2021-12-30 0.0260
3  Vanguard Small-Cap Index Fund 4628560 2021-12-30 0.0230
4  iShares Select Dividend ETF 4099983 2022-01-30 0.0204
5  Vanguard Selected Value Fund 3668000 2022-01-30 0.0182
6  Vanguard Fenway Funds-Equity Income Fund 3043945 2021-12-30 0.0151
7  Vanguard Small Cap Value Index Fund 2937934 2021-12-30 0.0146
8  Vanguard Extended Market Index Fund 2710121 2021-12-30 0.0135
9  DFA U.S. Small Cap Value Series 2540837 2022-01-30 0.0126

Value
0 390476109
1 143797724
2 128586947
3 113723719
4 104057568
5 93093840
6 74789728
7 72185038
8 66587672
9 64486443  ]

['options', ('2023-01-20', '2024-01-19')]
['sustainability',           Value
2022-5
palmoil      False
controversialWeapons  False
gambling      False
socialScore    7.43
nuclear       False

```

```

furLeather      False
alcoholic       False
gmo             False
catholic        False
socialPercentile 0
peerCount       96
governanceScore 10.52
environmentPercentile 0
animalTesting   False
tobacco         False
totalEsg        20.03
highestControversy 1
esgPerformance None
coal            False
pesticides      False
adult           False
percentile     24.5
peerGroup       Insurance
smallArms       False
environmentScore 2.08
governancePercentile 0
militaryContract False]
symbol: HSY
sector: Consumer Defensive
Index: SP500
vol_30d_2yr: 19940425.0
Sector 1YMF: -20.060012817382812
1YMF: -20.060012817382812
risk trend factor: -0.7068361298814138
    beta currentRatio debtToEquity dividendRate dividendYield \
HSY 0.354355      0.958      182.251      3.6      0.0175

earningsGrowth    ebitda ebitdaMargins forwardPE freeCashflow \
HSY      0.353      2543244032      0.27225      23.846064      1117503360

grossMargins grossProfits heldPercentInstitutions industry \
HSY      0.45457      4053818000      0.77841 Confectioners

marketCap operatingCashflow operatingMargins payoutRatio pegRatio \
HSY 42360795136      2129710976      0.23712      0.4508      2.7

priceToBook priceToSalesTrailing12Months profitMargins quickRatio \
HSY 14.528595      4.534636      0.1729      0.47

returnOnAssets returnOnEquity revenueGrowth revenuePerShare \
HSY      0.14067      0.62521      0.161      45.269

sector sharesOutstanding shortRatio totalCash \
HSY Consumer Defensive      145991008      2.35      338055008

totalCashPerShare totalDebt totalRevenue trailingPE
HSY      1.644      5313624064      9341609984      26.48541

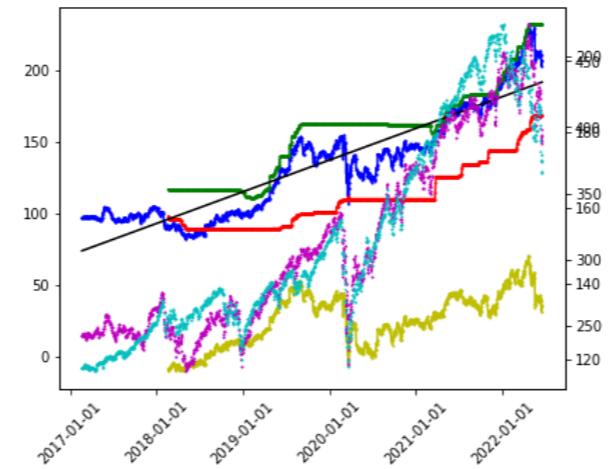
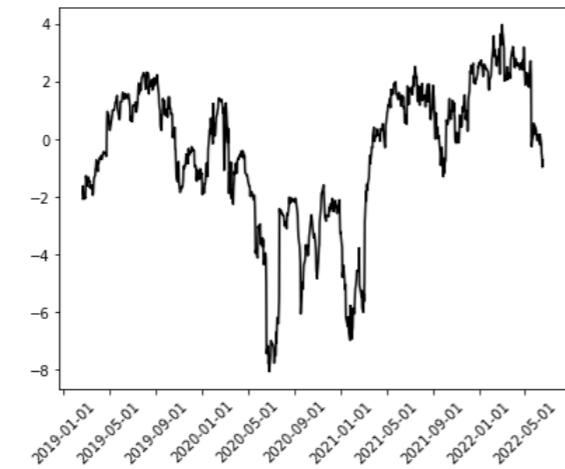
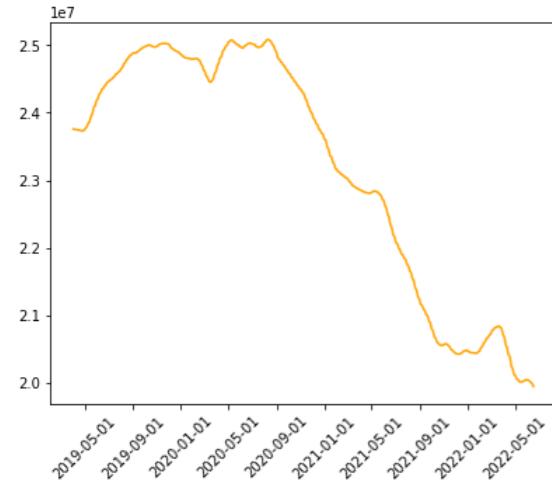
Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper
2022-06-17 206.029999 204.010093 209.173967 214.337841 217.173016 7.66194 201.849137 232.496895

```

volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst	
HSY	1.169855	206.029999	19940425.0	0.759001	0.971853	0.450651

l axis	r axis
blue	symbol
green	trailing_1yr_max
red	trailing_1yr_min
orange	30d_vol_2yr
black	risk_trend_factor/linear
yellow	supply_trend_1yr

Sector 1YMF: -74.80001831054688
Sector Volume Factor: 1.4135920452708397
Sector Risk Trend Factor: -2.283970024749523
Index 1YMF: -287.8400573730469
Index Volume Factor: 1.1835166983613057
Index Risk Trend Factor: -3.791860877423899



```

inner cv scores:  

best model: [None, None]  

best inner cv score, sdev (11 folds): 126.3212763245975 95.57165041596433  

test cv mean error, stdev (10 folds): 136.9483621081908 93.8352275256157  

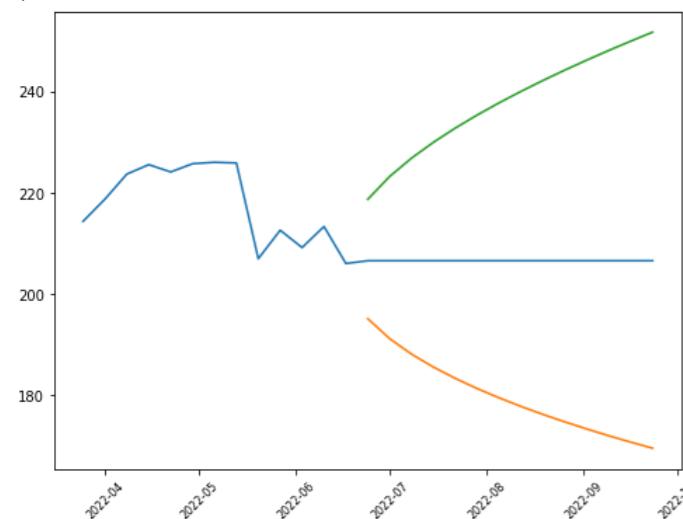
sell date: 2022-06-24  

expected return: 0.0026785381890335885  

discounted return: 0.0008920500730611458  

quarter return: 1.0854905708303757

```



```

['options', ('2022-08-19', '2023-01-20', '2024-01-19')]
['sustainability', Value
2022-5
palmoil False
controversialWeapons False
gambling False
socialScore 10.67
nuclear False
furLeather False
alcoholic False
gmo False
catholic False
socialPercentile None
peerCount 92
governanceScore 4.91
environmentPercentile None
animalTesting False
tobacco False
totalEsg 26.89
highestControversy 3
esgPerformance AVG_PERF
coal False
pesticides False
adult False
percentile 50.27
peerGroup Food Products
smallArms False
environmentScore 11.3
governancePercentile None
militaryContract False]
symbol: GFF
sector: Industrials
Index: SP600
vol_30d_2yr: 6627450.78125
Sector 1YMF: -11.290000915527344
1YMF: -11.290000915527344
risk trend factor: -0.7136535886302743
    beta currentRatio debtToEquity dividendRate dividendYield \
GFF 1.750892      2.829     240.206      0.36      0.0119

    earningsGrowth ebitda ebitdaMargins forwardPE freeCashflow \
GFF 2.841 294200000 0.11648 7.736292 -255609376

    grossMargins grossProfits heldPercentInstitutions industry \
GFF 0.29764 649036000 0.76782 Conglomerates

    marketCap operatingCashflow operatingMargins payoutRatio pegRatio \
GFF 1689861120 -23665000 0.09435 0.1771 0.4

    priceToBook priceToSalesTrailing12Months profitMargins quickRatio \
GFF 1.733357 0.669043 0.04655 1.09

    returnOnAssets returnOnEquity revenueGrowth revenuePerShare sector \
GFF 0.0472 0.12523 0.357 49.348 Industrials

    sharesOutstanding shortRatio totalCash totalCashPerShare totalDebt \
GFF 57032100 1.73 123288000 2.386 2121533056

    totalRevenue trailingPE
GFF 2525786880 13.523505

Adj Close 21dBOLD 21dMA-TP 21dBOLU 90dSMA 90dSDev 90d_lower 90d_upper
2022-06-17 26.34 27.29344 30.785079 34.276719 24.375714 5.418637 13.538441 35.212988

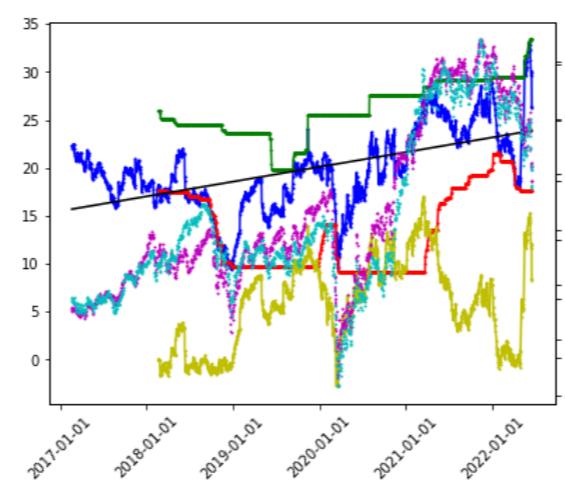
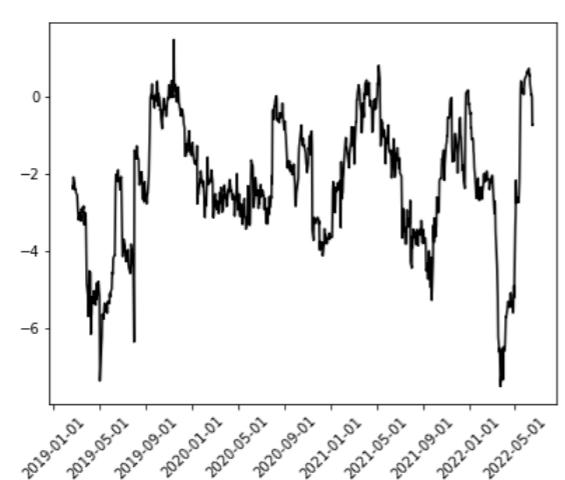
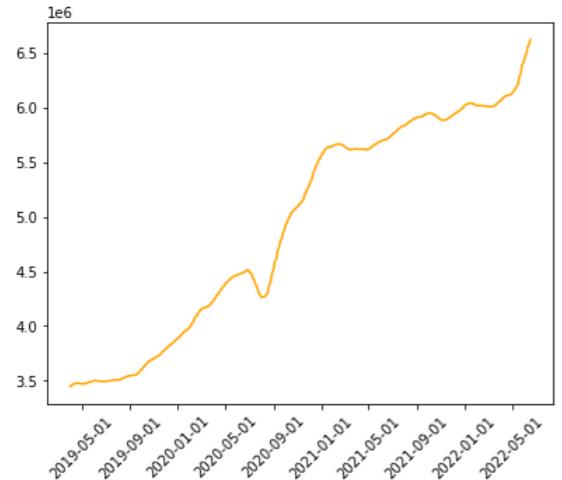
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	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
GFF	1.243283	26.34	6627450.78125	0.577684	0.074813	0.408717

l axis		r axis	
legend		legend	
blue	symbol	magenta	sector
green	trailing_1yr_max	cyan	index
red	trailing_1yr_min		
orange	30d_vol_2yr		
black	risk_trend_factor/linear		
yellow	supply_trend_1yr		

6/22/22, 7:59 AM

Sector 1YMF: -141.5800018310547
Sector Volume Factor: 0.8696853533786545
Sector Risk Trend Factor: -4.514668337867341
Index 1YMF: -77.27001953125
Index Volume Factor: 1.232760496116622
Index Risk Trend Factor: -5.242200185196592



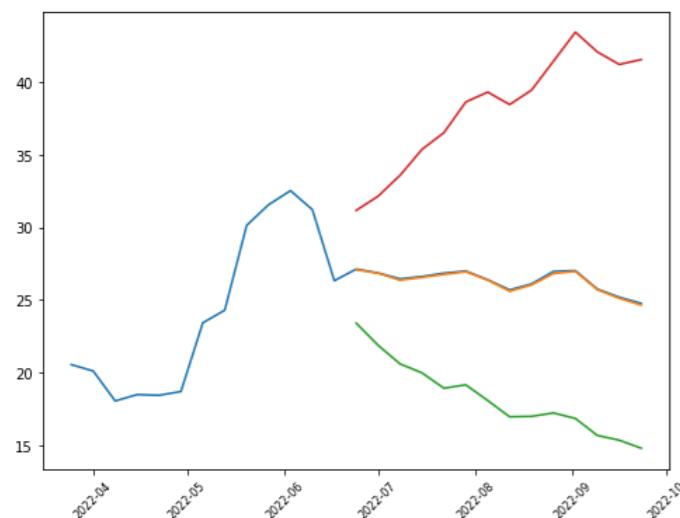
ets next 13 weeks

2022-06-17

2022-06-28

inner cv scores:

best model: ['mul', 'mul', True]
best inner cv score, sdev (11 folds): 19.533631715350072 25.415291134279812
test cv mean error, stdev (10 folds): 21.29266970321297 26.00950630215278
sell date: 2022-06-24
expected return: 0.030388918324823357
discounted return: 0.010028727845039276
quarter return: 2.504395016733404



```

['options', ('2022-07-15',)]
symbol: PXD
sector: Energy
Index: SP500
vol_30d_2yr: 47391610.9375
Sector 1YMF: -50.03999328613281
1YMF: -50.03999328613281
risk trend factor: -0.727748651596503
          beta currentRatio debtToEquity dividendRate dividendYield \
PXD 1.535843      1.541      25.456      12.34      0.0556

          ebitda ebitdaMargins forwardPE freeCashflow grossMargins \
PXD 9187000320      0.43846   8.385104   2404124928      0.53944

          grossProfits heldPercentInstitutions industry marketCap \
PXD 9392000000          0.92212 Oil & Gas E&P 57477361664

          operatingCashflow operatingMargins payoutRatio pegRatio priceToBook \
PXD 8265999872      0.31175      0.3288      0.46      2.42849

          priceToSalesTrailing12Months profitMargins quickRatio returnOnAssets \
PXD 2.743157      0.2003      1.404      0.12148

          returnOnEquity revenueGrowth revenuePerShare sector sharesOutstanding \
PXD 0.20075      1.006      86.852 Energy      241959008

          shortRatio totalCash totalCashPerShare totalDebt totalRevenue \
PXD 2.87 3256000000      13.457 6024999936 20952999936

          trailingPE
PXD 14.587044

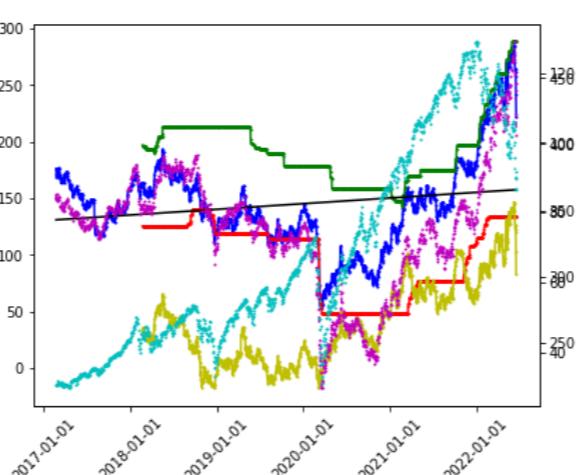
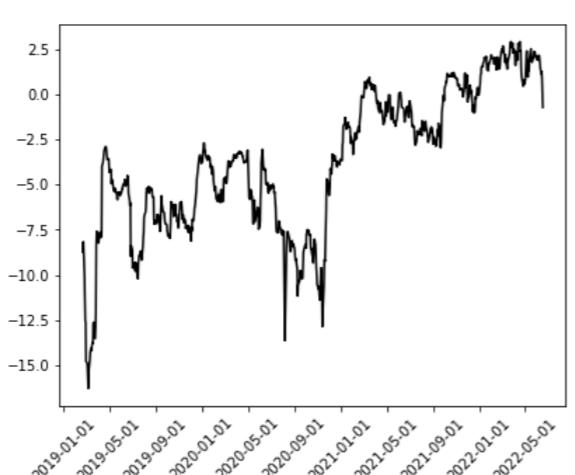
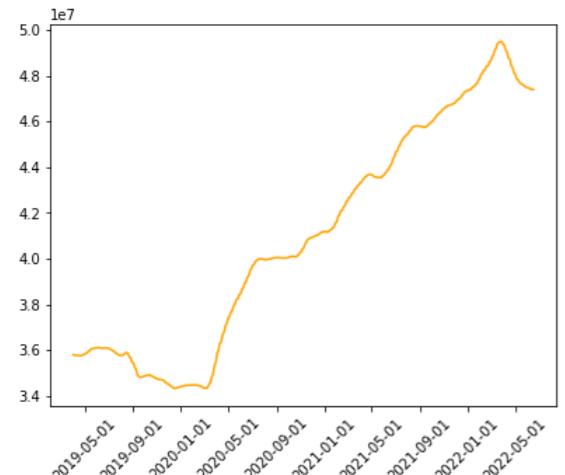
```

	Adj Close	21dBOLD	21dMA-TP	21dBOLU	90dSMA	90dSDev	90d_low	90d_high
2022-06-17	221.770004	243.334843	270.065238	296.795633	256.810952	15.318142	226.174668	287.447235

	volume_factor	latest_p	vol_30d_2yr	pct_2yr	adf	hurst
PXD	1.317982	221.770004	47391610.9375	0.685246	0.678534	0.490016

	l axis	r axis
	legend	legend
blue	symbol	
green	trailing_1yr_max	magenta
red	trailing_1yr_min	cyan
orange	30d_vol_2yr	sector
black	risk_trend_factor/linear	index

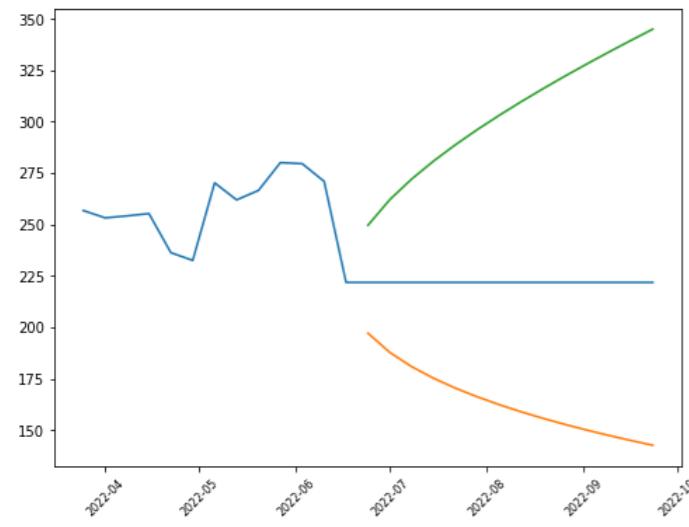
```
yellow      supply_trend_1yr
Sector 1YMF: -3.82000732421875
Sector Volume Factor: 0.8966412344901694
Sector Risk Trend Factor: -0.12330558135216596
Index 1YMF: -287.8400573730469
Index Volume Factor: 1.1835166983613057
Index Risk Trend Factor: -3.791860877423899
```



```

ets next 13 weeks
2022-06-17
2022-06-28
inner cv scores:
best model: [None, None]
best inner cv score, sdev (11 folds): 945.2115857211057 912.140861747462
test cv mean error, stdev (10 folds): 1035.2336219420604 908.8770047576885
sell date: 2022-06-24
expected return: 2.000032805750973e-05
discounted return: 6.66673157367903e-06
quarter return: 1.0006135253900612

```



```

['options', ('2023-01-20', '2024-01-19')]
['sustainability', Value
2022-5
palmoil False
controversialWeapons False
gambling False
socialScore 8.97
nuclear False
furLeather False
alcoholic False
gmo False
catholic False
socialPercentile None
peerCount 66
governanceScore 9.1
environmentPercentile None
animalTesting False
tobacco False
totalEsg 36.53
highestControversy 1
esgPerformance OUT_PERF
coal False
pesticides False
adult False
percentile 81.93
peerGroup Oil & Gas Producers
smallArms False
environmentScore 18.46
governancePercentile None
militaryContract False]

```

	exp_return	sell_date	stop_loss_price	days_delta	disc_rtn	qtr_rtn	outer_cv_avg_rmse_n11	outer_cv_std_n11	mean_revert_flag	pi_lower	pi_upper	price	Sector	Index	error_price_ratio	std_price_ratio
SYMBOL																
GFF	0.030389	2022-06-24	25.340129	3	0.010029	2.504395	21.292670	26.009506	False	23.413129	31.182082	26.340000	Industrials	SP600	0.808378	0.987453
CTRA	0.022025	2022-06-24	25.738612	3	0.007288	1.950531	10.006805	11.153853	False	24.352681	30.211903	26.540001	Energy	SP500	0.377046	0.420266
APA	0.146228	2022-07-15	35.733459	24	0.005703	1.687352	51.401745	47.298532	False	27.187280	75.367760	39.220001	Energy	SP500	1.310600	1.205980
EQT	0.164196	2022-07-22	36.213894	31	0.004916	1.570175	32.888755	51.452815	False	29.430572	59.485247	35.939999	Energy	SP400	0.915102	1.431631
PTEN	0.354426	2022-08-26	14.090389	66	0.004607	1.526367	5.602470	4.676791	False	7.700867	61.568825	15.240000	Energy	SP600	0.367616	0.306876
CAL	0.141657	2022-07-22	25.698284	31	0.004283	1.481667	18.966262	17.257308	False	18.120540	51.468221	26.639999	Consumer Cyclical	SP600	0.711947	0.647797
CEIX	0.340486	2022-09-02	42.003024	73	0.004022	1.446723	36.226317	60.302806	False	29.658118	137.260990	46.150002	Energy	SP600	0.784969	1.306670
GO	0.127441	2022-07-22	38.483297	31	0.003877	1.427582	23.788533	17.286792	False	34.844785	58.805903	40.150002	Consumer Defensive	SP400	0.592491	0.430555
TALO	0.264675	2022-08-26	16.873440	66	0.003564	1.387243	41.434579	71.024542	False	10.924927	50.560231	18.610001	Energy	SP600	2.226468	3.816472
PDCE	0.262066	2022-08-26	61.326366	66	0.003533	1.383255	70.972532	66.193714	False	39.349463	157.271355	64.779999	Energy	SP400	1.095593	1.021823
BMY	0.034792	2022-07-01	71.963778	10	0.003426	1.369772	80.969548	128.606268	False	69.704364	84.375142	73.769997	Healthcare	SP500	1.097595	1.743341
SM	0.333557	2022-09-23	37.525088	94	0.003067	1.325414	41.847935	46.453127	False	18.359214	152.745607	39.709999	Energy	SP600	1.053839	1.169809
LPI	0.282449	2022-09-16	80.060619	87	0.002864	1.300916	246.780099	167.320049	False	30.124573	496.115445	81.470001	Energy	SP600	3.029092	2.053763
VPU	0.027129	2022-07-01	139.692828	10	0.002680	1.279236	285.003322	656.825285	False	134.258472	157.200137	141.440002	error	nan	2.015012	4.643844
MRO	0.251030	2022-09-16	22.918184	87	0.002578	1.267237	13.816576	12.742114	False	16.282408	57.014782	24.150000	Energy	SP500	0.572115	0.527624
FCN	0.205273	2022-09-02	159.681629	73	0.002561	1.265289	109.639143	46.897897	False	150.921844	256.365227	164.020004	error	SP400	0.668450	0.285928
NFG	0.114014	2022-08-05	66.100071	45	0.002402	1.246998	19.906572	15.171302	False	62.044677	86.187434	65.440002	Energy	SP400	0.304196	0.231835
OXY	0.229220	2022-09-23	52.736805	94	0.002198	1.223834	72.475170	60.181503	False	35.219452	133.007080	55.680000	Energy	SP500	1.301637	1.080846
SAFM	0.081971	2022-07-29	202.526732	38	0.002075	1.210146	459.890099	617.424185	False	180.321000	281.711822	208.309998	Consumer Defensive	SP400	2.207720	2.963968
PBF	0.094169	2022-08-05	30.634629	45	0.002002	1.202003	30.715015	25.661947	False	21.101053	61.711449	32.980000	Energy	SP600	0.931322	0.778106
COP	0.206137	2022-09-23	92.637139	94	0.001996	1.201337	159.059035	142.157387	False	73.279226	176.748854	93.739998	Energy	SP500	1.696811	1.516507
HES	0.187856	2022-09-16	102.946362	87	0.001981	1.199666	199.071081	129.126253	False	77.092578	193.683320	102.870003	Energy	SP500	1.935171	1.255237
CSL	0.132331	2022-08-26	230.646274	66	0.001885	1.189148	491.752383	385.041576	False	210.697666	334.807456	234.559998	error	SP400	2.096489	1.641548
ROCC	0.088075	2022-08-05	33.138293	45	0.001878	1.188356	78.012047	108.682302	False	16.946254	94.258741	37.820000	Energy	SP600	2.062719	2.873673
MTDR	0.174990	2022-09-23	48.523986	94	0.001717	1.170966	55.750342	39.839276	False	21.167849	154.570300	51.200001	Energy	SP400	1.088874	0.778111
LLY	0.132795	2022-09-02	286.741623	73	0.001710	1.170161	433.703297	286.094528	False	256.630723	423.137678	290.899994	Healthcare	SP500	1.490902	0.983481
NOC	0.119192	2022-08-26	443.055845	66	0.001708	1.169957	1104.542584	903.070108	False	404.877239	609.698035	443.929993	Industrials	SP500	2.488101	2.034262
MDYG	0.004980	2022-06-24	58.422516	3	0.001657	1.164540	92.566302	171.1541961	False	56.616609	64.070648	59.930000	error	nan	1.544574	2.862372
DVN	0.159320	2022-09-23	56.074729	94	0.001574	1.155679	69.675553	58.603491	False	35.400020	127.808209	58.020000	Energy	SP500	1.200889	1.010057
UNM	0.047465	2022-07-22	31.460177	31	0.001497	1.147541	21.693368	27.271433	False	25.977490	44.776520	32.560001	Financial Services	SP400	0.666258	0.837575
ROG	0.149577	2022-09-23	242.447020	94	0.001484	1.146173	1106.816715	1545.323933	False	172.883339	493.101993	259.380005	error	SP600	4.267163	5.957760
FANG	0.144389	2022-09-23	113.311459	94	0.001436	1.141110	478.968381	358.825670	False	69.989313	279.832298	122.290001	Energy	SP500	3.916660	2.934219
BANF	0.034904	2022-07-15	90.123707	24	0.001431	1.140556	118.635699	88.263652	False	81.096070	118.841009	94.860001	error	SP600	1.250640	0.930462
VAW	0.004089	2022-06-24	158.639438	3	0.001361	1.133322	311.019487	418.064741	False	153.367681	174.743177	162.800003	error	nan	1.910439	2.567965
VFH	0.004058	2022-06-24	73.600905	3	0.0											

AnalyzeSP1500-Backup

	exp_return	sell_date	stop_loss_price	days_delta	disc_rtn	qtr_rtn	outer_cv_avg_rmse_n11	outer_cv_std_n11	mean_revert_flag	pi_lower	pi_upper	price	Sector	Index	error_price_ratio	std_price_ratio
SYMBOL																
SAFT	0.047910	2022-08-12	87.084720	52	0.000900	1.086320	51.985036	51.275015	False	80.775222	109.376200	89.279999	Financial Services	SP600	0.582270	0.574317
HSY	0.002679	2022-06-24	200.847126	3	0.000892	1.085491	136.948362	93.835228	False	195.112394	218.725542	206.029999	Consumer Defensive	SP500	0.664701	0.455444
HRB	0.060136	2022-08-26	31.534659	66	0.000885	1.084807	7.292311	6.519292	False	25.600879	47.807490	33.000000	Consumer Cyclical	SP400	0.220979	0.197554
AZO	0.078548	2022-09-16	1915.823478	87	0.000870	1.083245	68455.064386	91507.474599	False	1562.020972	2956.720422	1992.550049	Consumer Cyclical	SP500	34.355506	45.924806
CIVI	0.069493	2022-09-09	54.729988	80	0.000840	1.080325	61.659991	42.567136	True	24.943196	183.399552	60.080002	Energy	SP600	1.026298	0.708508
XOM	0.079458	2022-09-23	84.529200	94	0.000814	1.077703	149.904973	170.105088	False	67.558220	127.920878	86.120003	Energy	SP500	1.740652	1.975210
VRTX	0.077297	2022-09-23	253.559519	94	0.000792	1.075592	1046.692587	1594.610545	False	193.780269	447.826545	263.089996	Healthcare	SP500	3.978458	6.061084
WRB	0.002131	2022-06-24	64.664657	3	0.000710	1.067458	37.077872	65.039029	False	62.366923	71.896474	66.820000	Financial Services	SP500	0.554892	0.973347
MTOR	0.057214	2022-09-09	33.496935	80	0.000696	1.066074	25.484583	23.006729	False	23.498472	61.438726	35.939999	error	SP600	0.709087	0.640143
SLY	0.046276	2022-08-26	76.553255	66	0.000686	1.065088	137.652930	194.205071	False	63.978990	104.106844	78.089996	error	nan	1.762747	2.486939
AZPN	0.064686	2022-09-23	181.901282	94	0.000667	1.063267	536.281422	511.570564	False	143.944121	281.048473	189.199997	Technology	SP400	2.834468	2.703861
SJI	0.054736	2022-09-09	33.417880	80	0.000666	1.063201	8.673775	8.038840	False	26.738068	48.664196	34.200001	error	SP600	0.253619	0.235054
ULTA	0.001882	2022-06-24	374.198559	3	0.000627	1.059354	2511.062425	3806.794851	False	351.822194	447.020323	395.829987	Consumer Cyclical	SP500	6.343790	9.617247
PSB	0.026834	2022-08-05	176.732977	45	0.000589	1.055630	419.119770	523.907229	False	160.287624	227.955198	185.919998	Real Estate	SP400	2.254302	2.817918
VOX	0.039334	2022-08-26	90.134304	66	0.000585	1.055251	142.340035	124.210720	False	79.455324	115.726744	92.860001	error	nan	1.532846	1.337613
EXLS	0.034602	2022-08-26	127.016555	66	0.000516	1.048560	207.634306	185.405571	False	104.504230	184.631715	134.259995	error	SP600	1.546509	1.380944
MCK	0.041308	2022-09-16	289.044813	87	0.000465	1.043733	436.745604	368.057010	False	239.746705	408.598708	300.570007	Healthcare	SP500	1.453058	1.224530
VNQ	0.034174	2022-09-02	85.499010	73	0.000460	1.043259	167.133466	335.246220	False	74.304134	110.706593	87.699997	error	nan	1.905741	3.822648
VGT	0.044058	2022-09-23	312.435882	94	0.000459	1.043101	1427.680511	1267.772390	False	270.996360	417.821474	319.809998	error	nan	4.464152	3.964142
SPY	0.030060	2022-08-26	360.262357	66	0.000449	1.042149	1700.987246	2487.216200	False	322.287089	444.768693	365.859985	error	nan	4.649285	6.798273
GCP	0.041201	2022-09-23	29.610915	94	0.000430	1.040307	8.753591	9.621974	False	21.501566	47.136338	30.930000	error	SP600	0.283013	0.311089
MANT	0.038042	2022-09-23	91.148097	94	0.000397	1.037218	75.670822	58.095859	False	72.068787	134.340780	94.790001	Technology	SP600	0.798300	0.612890
ACC	0.036413	2022-09-23	61.533395	94	0.000381	1.035625	66.265145	144.037079	False	49.402520	89.700006	64.230003	Real Estate	SP400	1.031685	2.242520
DINO	0.032512	2022-09-23	42.716886	94	0.000340	1.031809	75.885473	79.444664	False	26.031738	88.199668	45.000000	Energy	SP400	1.686344	1.765437
PLAB	0.020161	2022-08-26	18.043879	66	0.000302	1.028214	4.293160	5.320768	False	13.421844	28.435600	19.150000	Technology	SP600	0.224186	0.277847
HALO	0.023763	2022-09-23	41.859511	94	0.000250	1.023252	26.226304	24.400247	False	30.612597	68.294758	44.139999	Healthcare	SP400	0.594162	0.552792
VHT	0.015822	2022-09-23	215.822226	94	0.000167	1.015483	393.713720	549.759727	False	186.545393	268.240805	220.210007	error	nan	1.787901	2.496525
MPC	0.014138	2022-09-23	82.067277	94	0.000149	1.013835	151.183498	163.530291	False	55.449741	146.669040	87.290001	Energy	SP500	1.731968	1.873414
VDC	0.014003	2022-09-23	174.583161	94	0.000148	1.013703	195.945351	249.963925	False	155.997433	206.634008	177.059998	error	nan	1.106661	1.411747
UTHR	0.007024	2022-09-23	210.435231	94	0.000074	1.006874	561.166776	464.135077	False	157.943235	309.010302	219.380005	Healthcare	SP400	2.557967	2.115667
UFCS	0.004271	2022-09-23	30.971037	94	0.000045	1.004180	14.539988	8.794074	False	23.289648	46.143794	32.570000	error	SP600	0.446423	0.270005
RRC	0.000027	2022-06-24	24.048773	3	0.000009	1.000828	12.432073	14.151900	False	21.806835	31.696552	26.290001	Energy	SP400	0.472882	0.538300
NTCT	0.000778	2022-09-23	31.541939	94	0.000008	1.000762	10.486504	6.078588	True	23.393533	46.116834	32.930000	Technology	SP600	0.318448	0.184591
EOG	0.000024	2022-06-24	105.049781	3	0.000008	1.000738	274.714265	184.7								