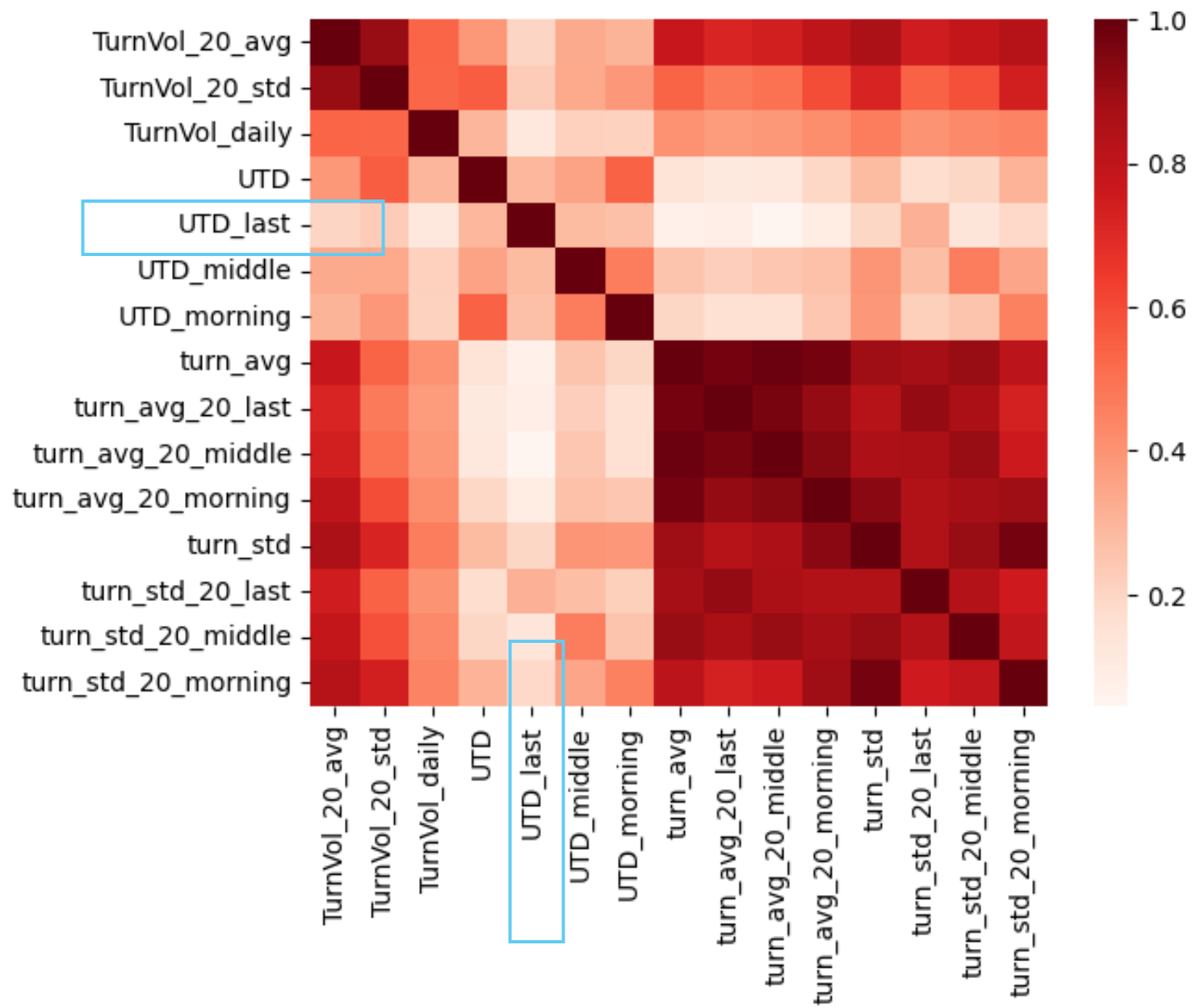
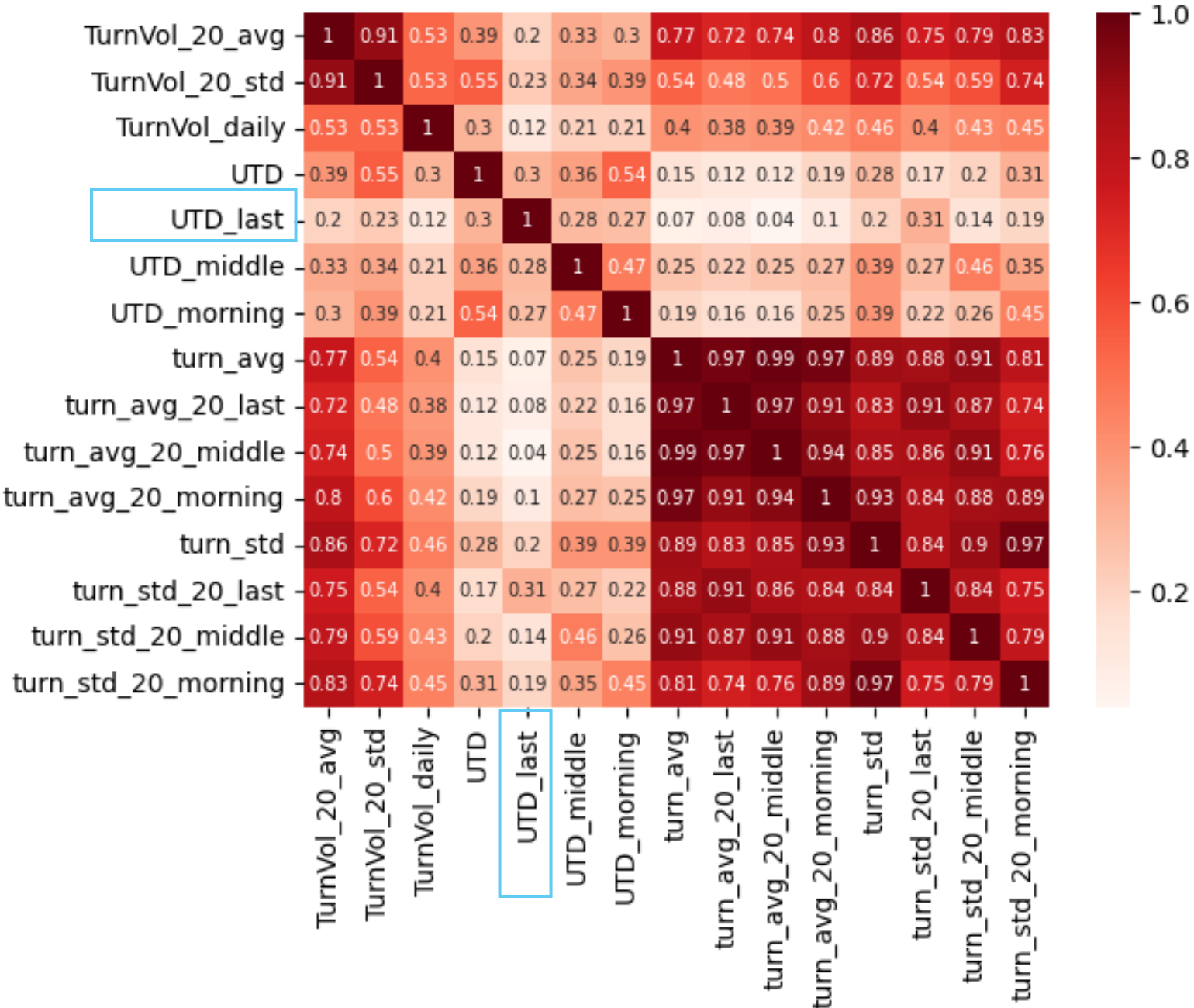


分钟换手率波动率
TurnVol相关因子

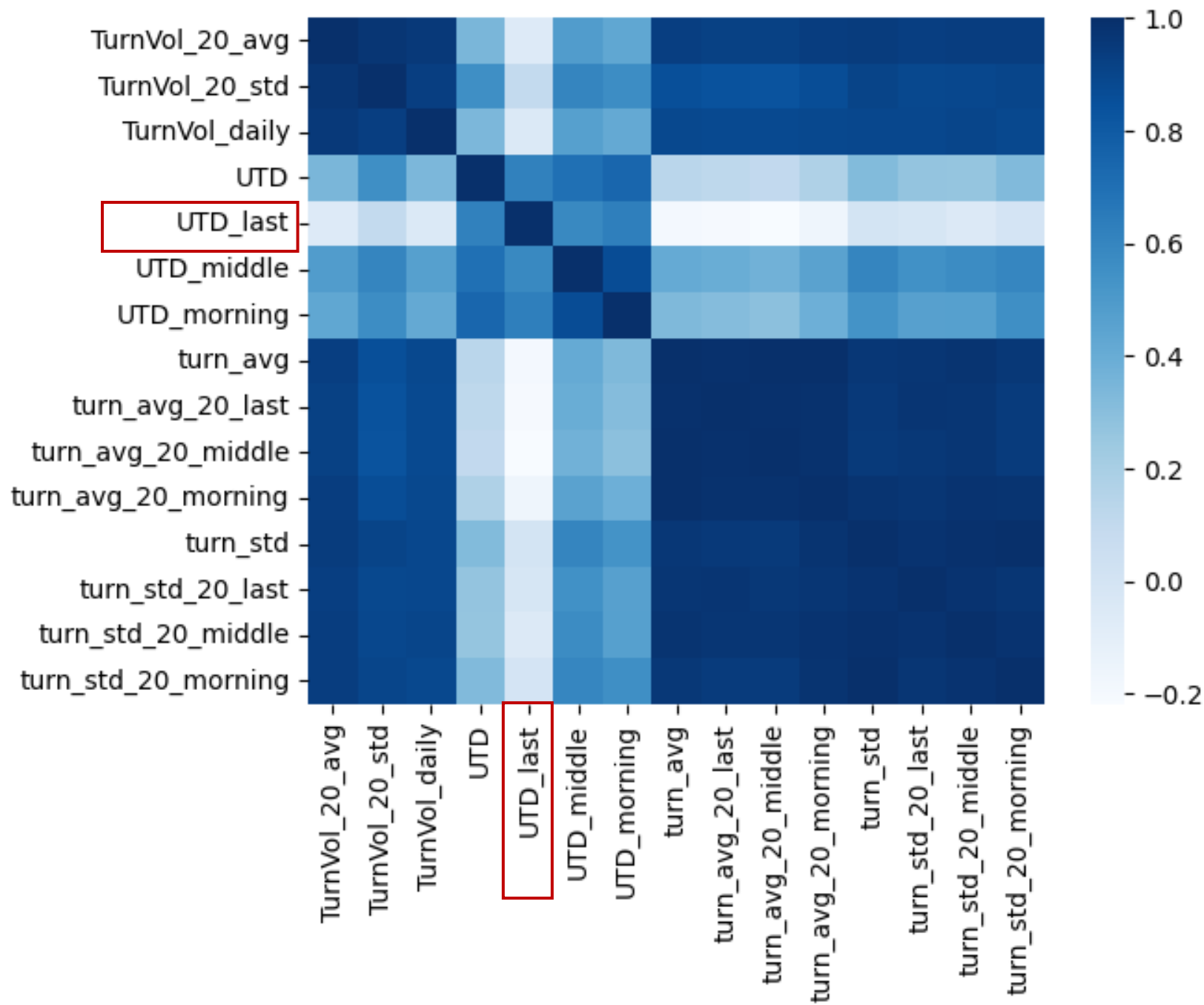
横截面 correlation



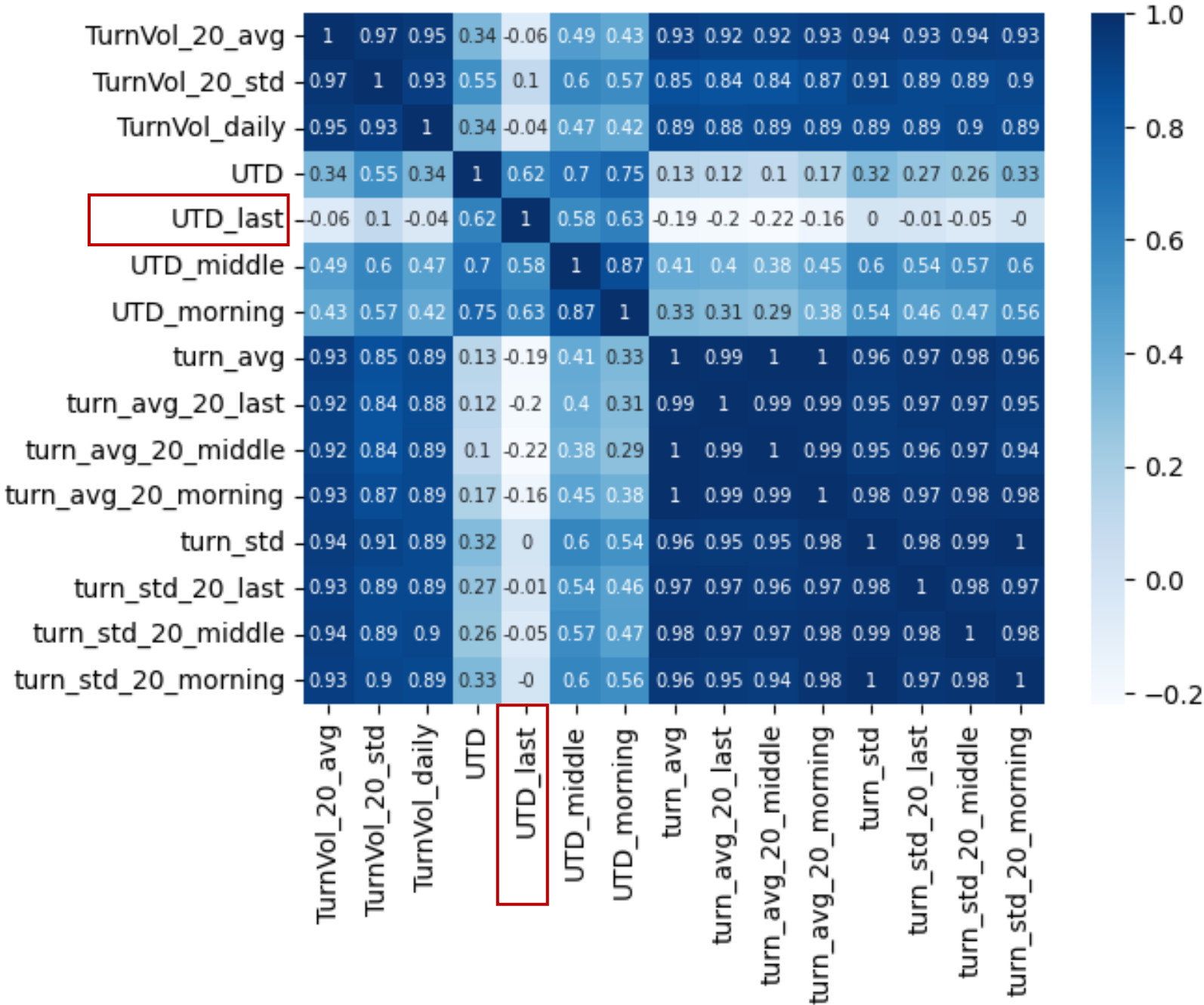
横截面 correlation



IC correlation

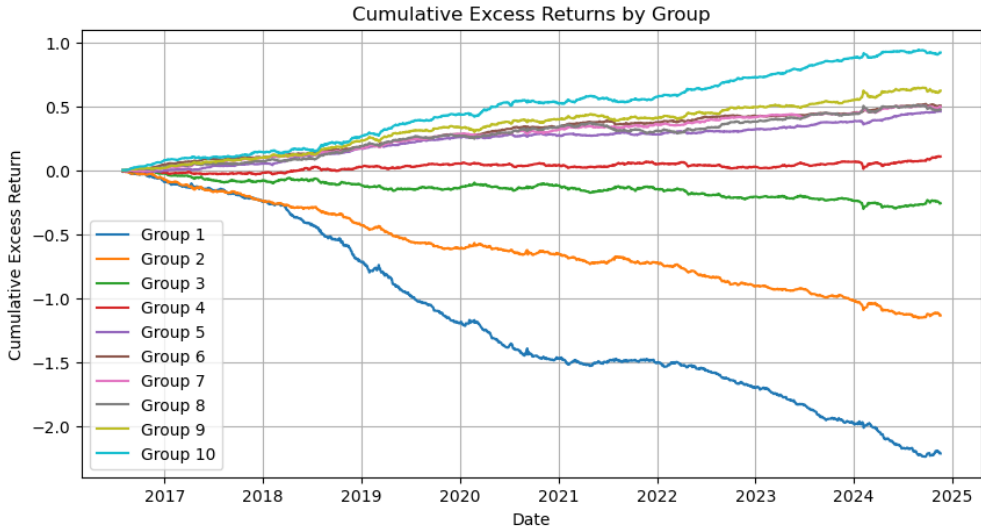
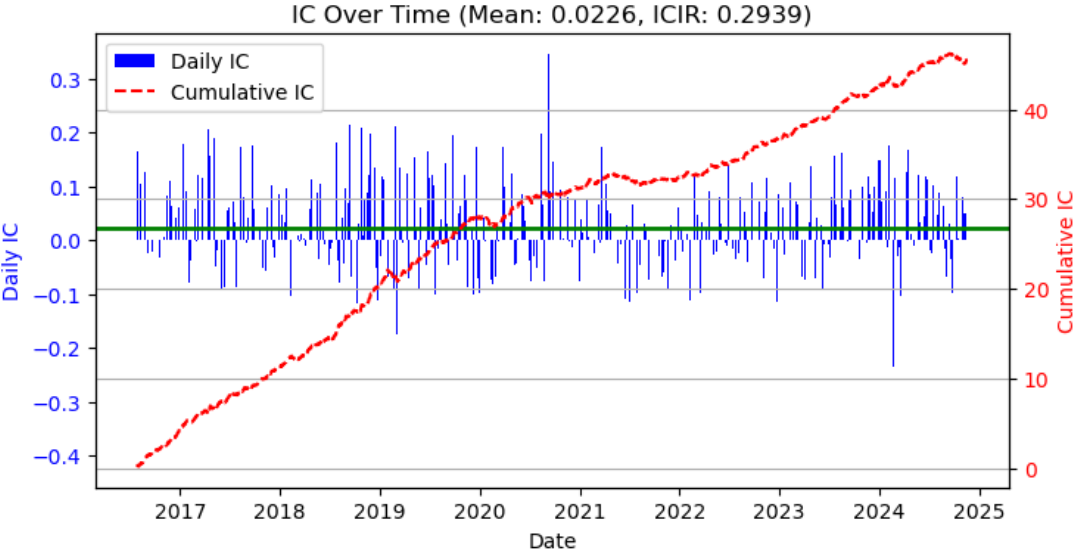


IC correlation



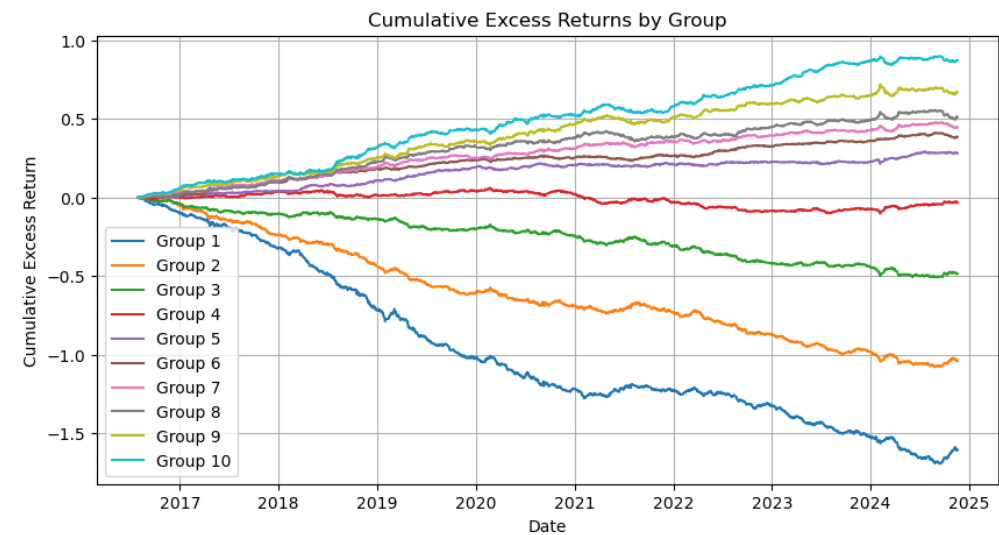
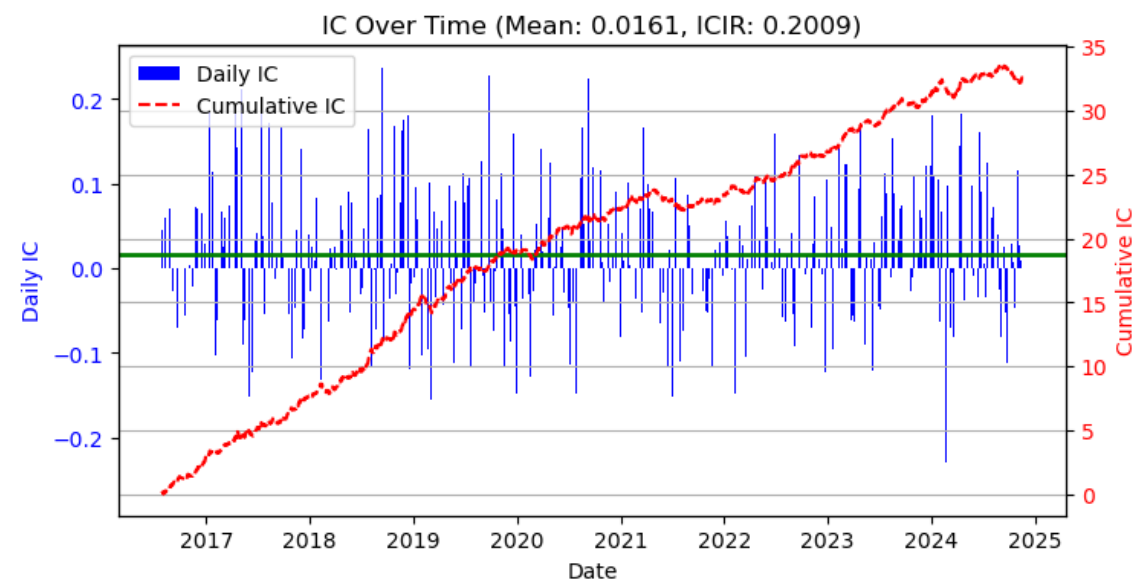
分钟换手率波动率TurnVol

$$TurnVol = std(\frac{1min_trading_volume}{circulating_a})$$



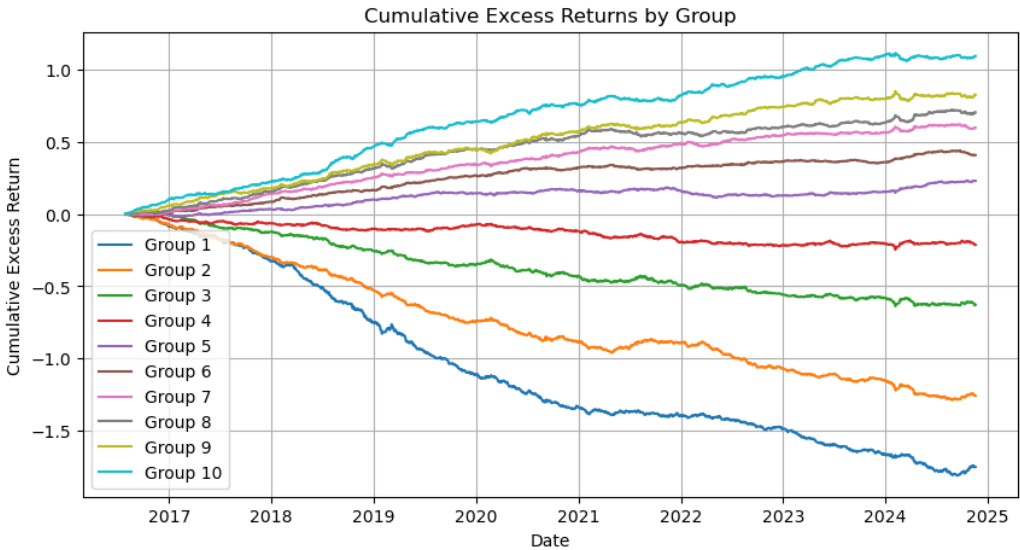
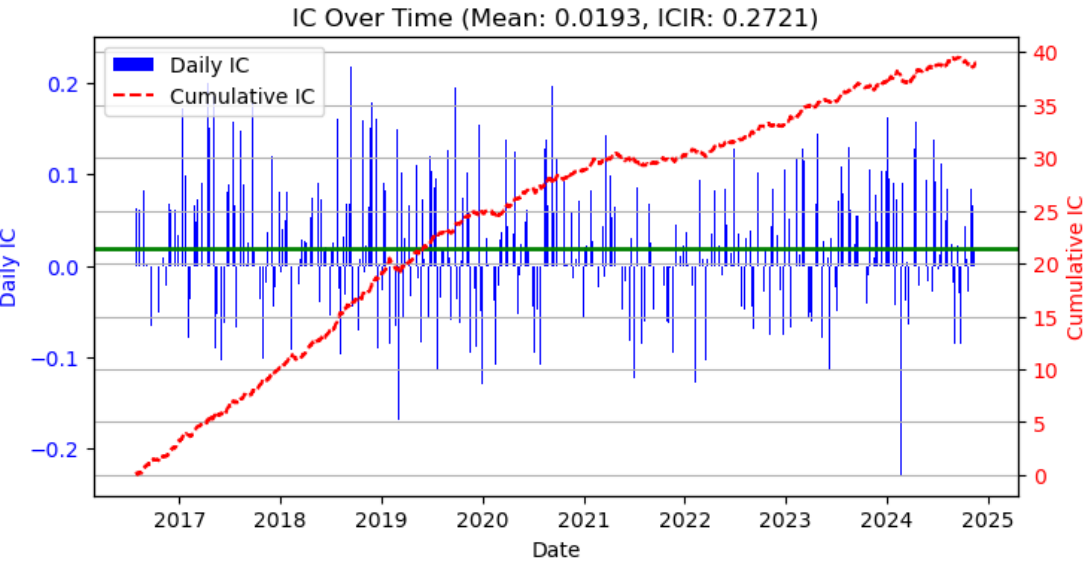
	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.513436	-0.274375	-7.396036	-3.945876	0.796871
1	-0.529922	-0.140479	-10.507991	-2.787115	1.298143
2	-0.468085	-0.031702	-11.090285	-0.752246	1.454608
3	-0.446018	0.013659	-13.465360	0.413352	1.532257
4	-0.413122	0.057493	-16.281588	2.275453	1.568715
5	-0.408590	0.063028	-16.285230	2.514795	1.572061
6	-0.401013	0.061747	-13.335422	2.054288	1.542532
7	-0.382923	0.059263	-10.203702	1.580374	1.473953
8	-0.324342	0.077523	-7.811469	1.869001	1.339549
9	-0.132608	0.114513	-3.234633	2.801233	0.823735

过去20日TurnVol的均值



	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.237338	-0.199503	-3.692337	-3.102327	0.126116
1	-0.221746	-0.129067	-4.296444	-2.500106	0.308930
2	-0.179289	-0.060164	-4.359445	-1.464070	0.397083
3	-0.135760	-0.004003	-4.337786	-0.127921	0.439192
4	-0.100579	0.034844	-4.072830	1.414466	0.451410
5	-0.084680	0.047909	-3.592014	2.039646	0.441962
6	-0.069680	0.055475	-2.209445	1.763935	0.417183
7	-0.047302	0.063540	-1.223443	1.646816	0.369473
8	-0.001662	0.083208	-0.038975	1.952083	0.282902
9	0.073631	0.108332	1.703696	2.507097	0.115672

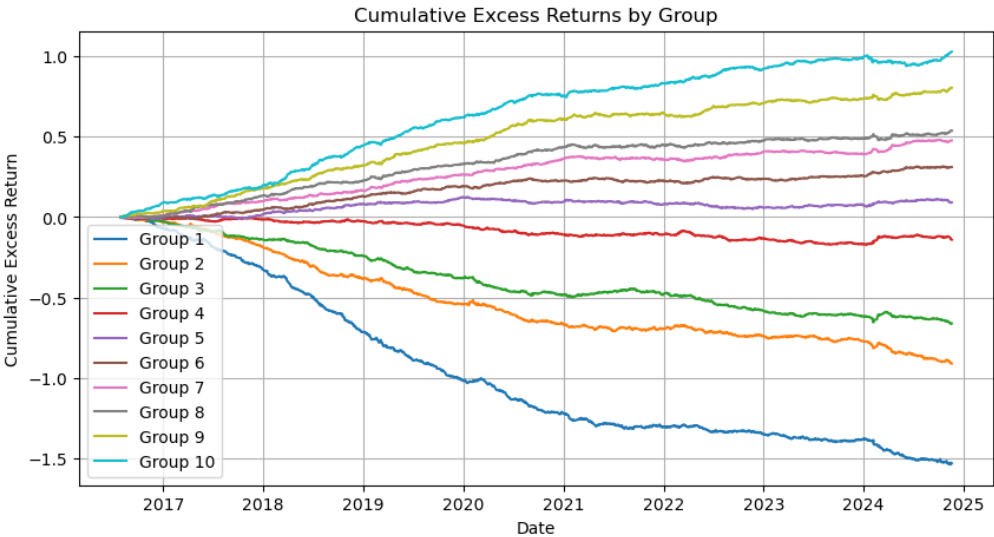
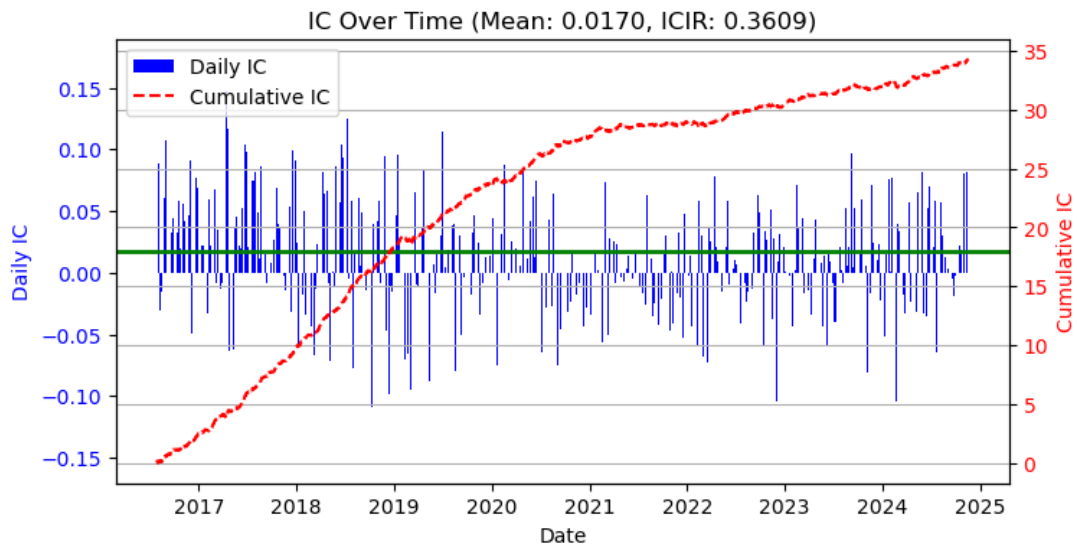
过去20日TurnVol的波动率



	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.265067	-0.217161	-4.611062	-3.775746	0.159688
1	-0.259613	-0.156084	-5.243985	-3.150069	0.345097
2	-0.206228	-0.077995	-4.879501	-1.843579	0.427442
3	-0.167949	-0.026412	-5.250764	-0.827053	0.471790
4	-0.121214	0.028465	-5.053659	1.192022	0.498929
5	-0.103281	0.050519	-4.164044	2.053803	0.512666
6	-0.078679	0.074043	-2.553769	2.416172	0.509074
7	-0.055685	0.087332	-1.512965	2.384811	0.476724
8	-0.017229	0.102358	-0.433552	2.580280	0.398624
9	0.078331	0.135607	2.004210	3.470888	0.190918

UTD: 换手率分布均匀度

$$UTD = \frac{std(\text{最近20日的} TurnVol_{daily})}{mean(\text{最近20日的} TurnVol_{daily})}$$

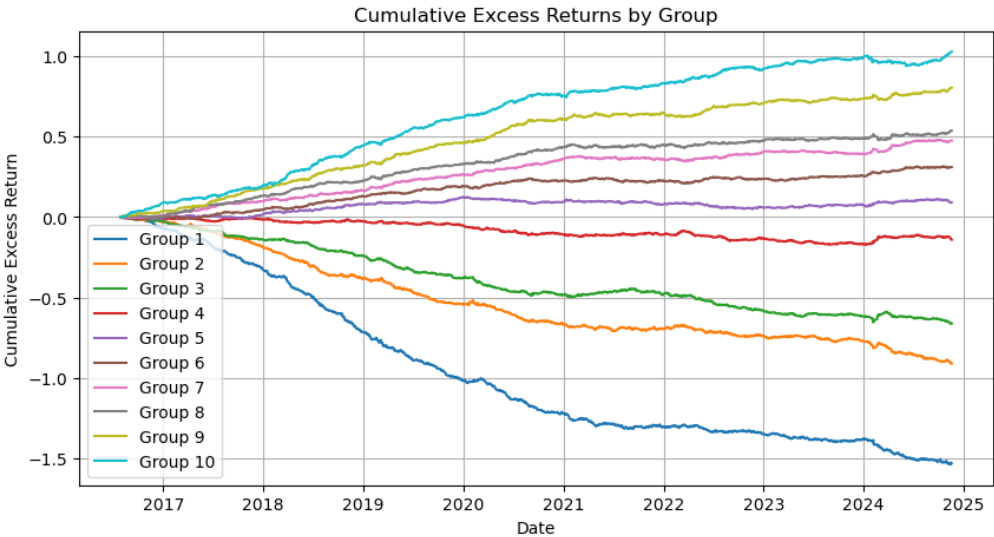
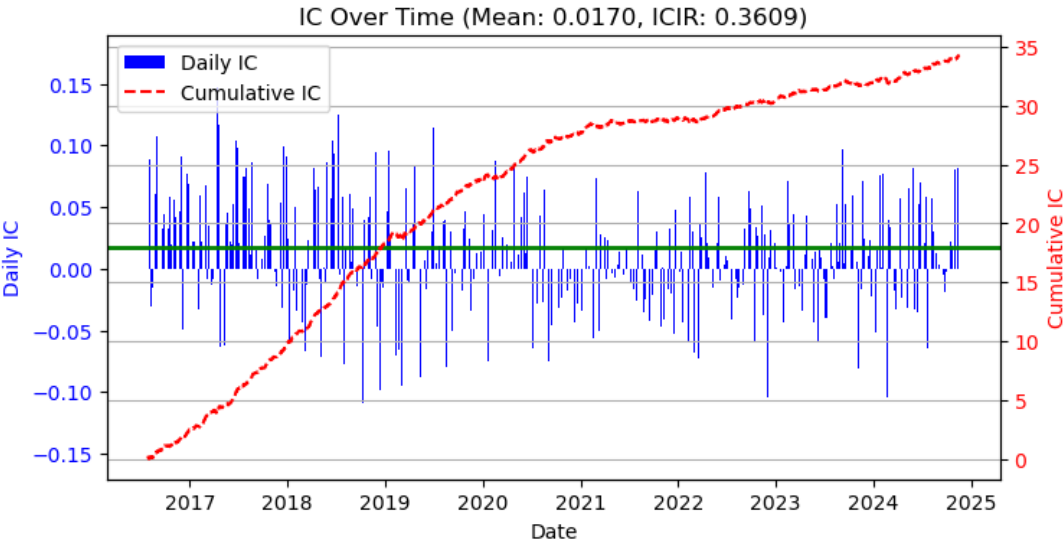


	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.260133	-0.190018	-5.982196	-4.367134	0.233719
1	-0.244018	-0.113029	-6.560755	-3.043500	0.436630
2	-0.245296	-0.082096	-7.926778	-2.656416	0.543999
3	-0.207540	-0.017414	-8.158749	-0.684710	0.633753
4	-0.200936	0.011344	-8.789297	0.500167	0.707600
5	-0.187878	0.038674	-8.392828	1.748549	0.755173
6	-0.172019	0.059149	-6.846557	2.373779	0.770560
7	-0.155119	0.066740	-5.692011	2.452301	0.739532
8	-0.090101	0.099874	-2.964292	3.294419	0.633247
9	0.028793	0.127699	0.844802	3.746244	0.329686

UTD & 时间差分UTD因子

UTD： 换手率分布均匀度

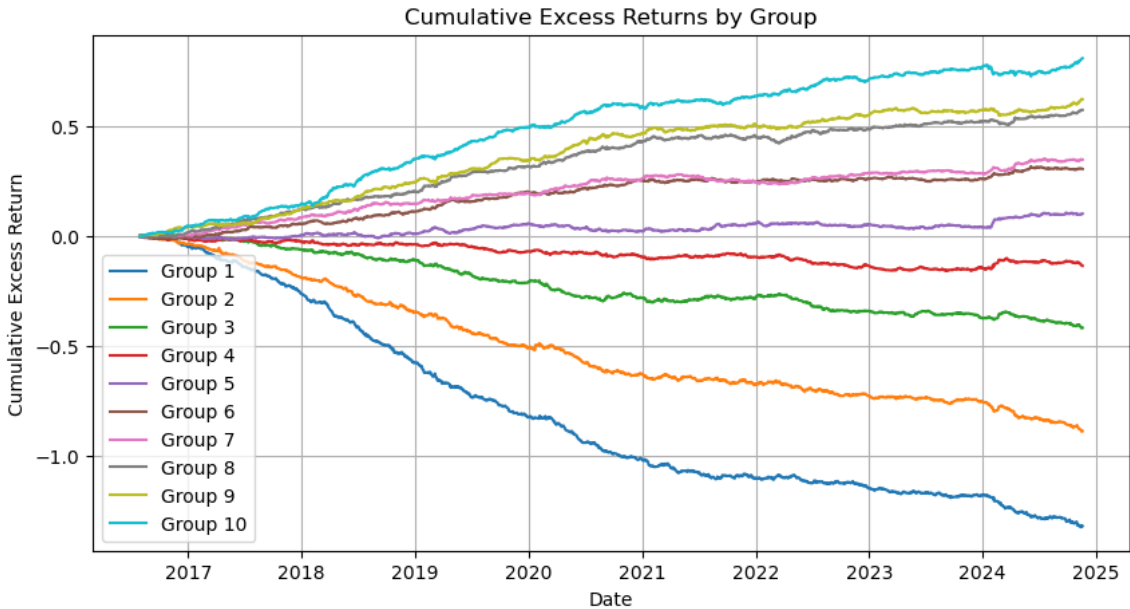
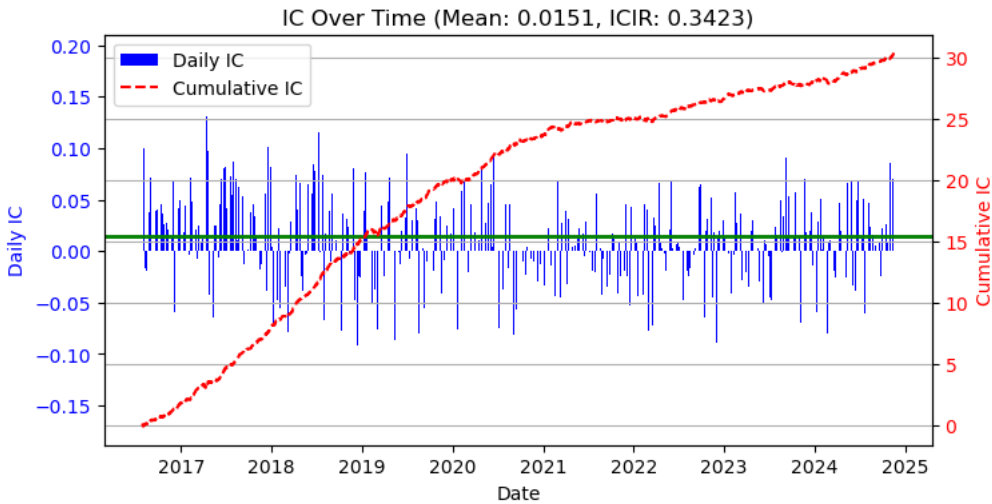
$$UTD = \frac{std(最近20日的TurnVol_{daily})}{mean(最近20日的TurnVol_{daily})}$$



	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.260133	-0.190018	-5.982196	-4.367134	0.233719
1	-0.244018	-0.113029	-6.560755	-3.043500	0.436630
2	-0.245296	-0.082096	-7.926778	-2.656416	0.543999
3	-0.207540	-0.017414	-8.158749	-0.684710	0.633753
4	-0.200936	0.011344	-8.789297	0.500167	0.707600
5	-0.187878	0.038674	-8.392828	1.748549	0.755173
6	-0.172019	0.059149	-6.846557	2.373779	0.770560
7	-0.155119	0.066740	-5.692011	2.452301	0.739532
8	-0.090101	0.099874	-2.964292	3.294419	0.633247
9	0.028793	0.127699	0.844802	3.746244	0.329686

时间差分UTD： 早盘UTD

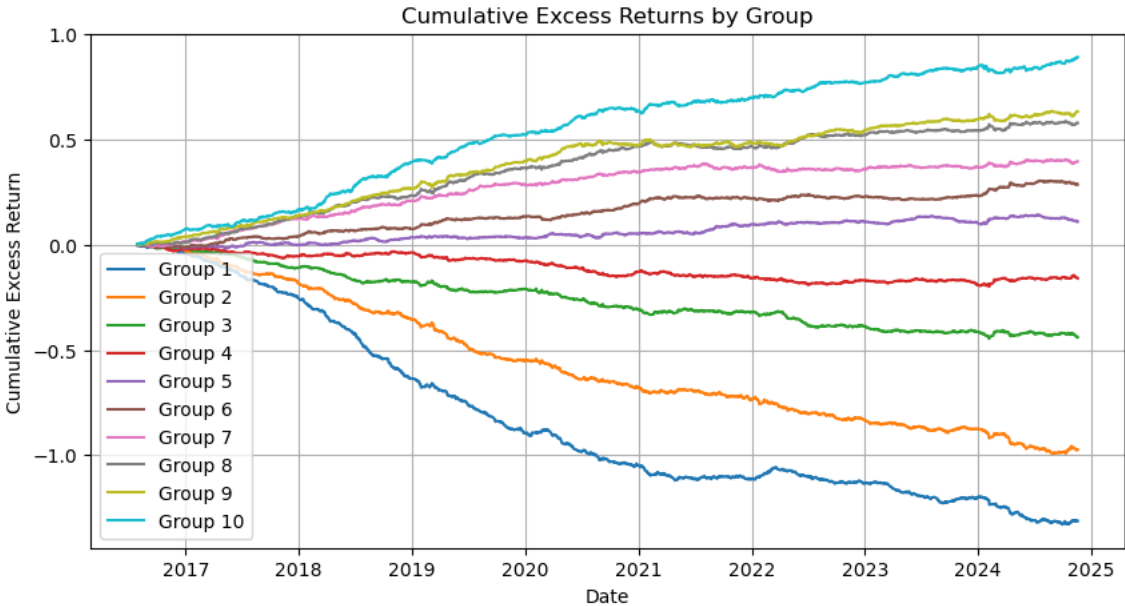
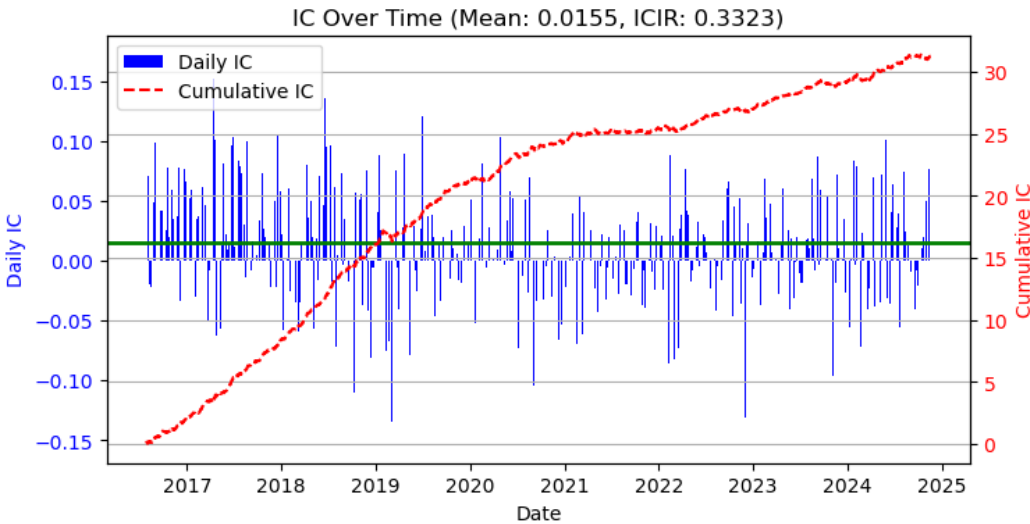
$$UTD = \frac{std(\text{最近20日的} TurnVol_{\text{早盘}})}{mean(\text{最近20日的} TurnVol_{\text{早盘}})}$$



	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.237175	-0.163852	-6.068949	-4.188946	0.244409
1	-0.240724	-0.110223	-6.760057	-3.099748	0.435005
2	-0.212337	-0.051807	-7.254729	-1.773480	0.535098
3	-0.203795	-0.016734	-8.192400	-0.675850	0.623538
4	-0.196968	0.012705	-8.578120	0.556767	0.698912
5	-0.188579	0.038026	-8.103732	1.650966	0.755349
6	-0.189862	0.043310	-7.841127	1.798714	0.777242
7	-0.154293	0.071397	-5.731805	2.667971	0.752300
8	-0.118605	0.077436	-4.136105	2.705876	0.653471
9	-0.003966	0.100627	-0.119245	3.025994	0.348640

时间差分UTD： 中间盘UTD

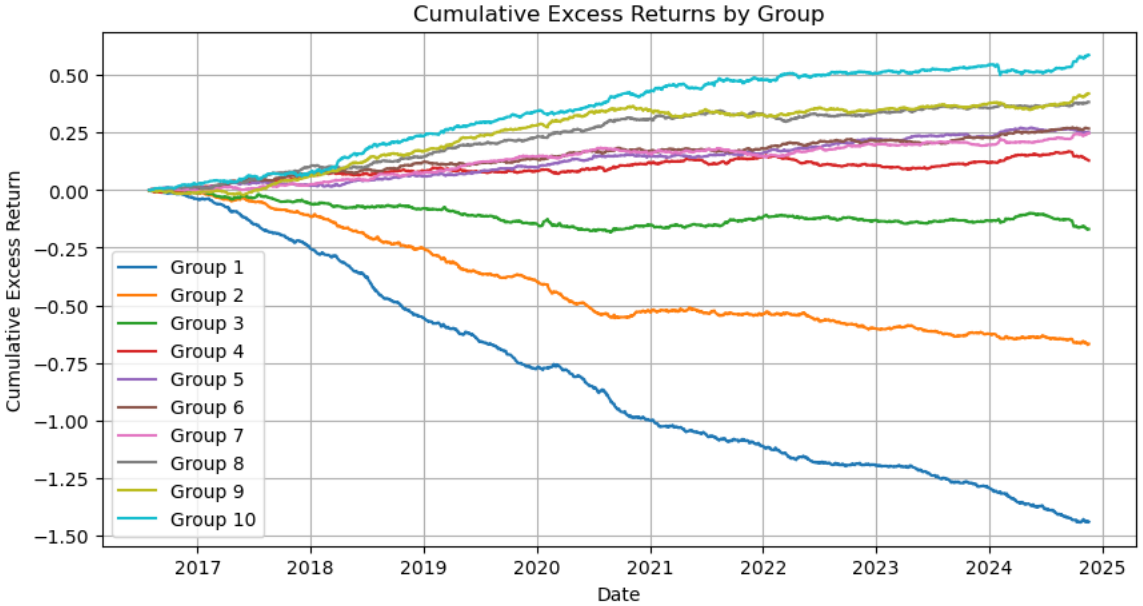
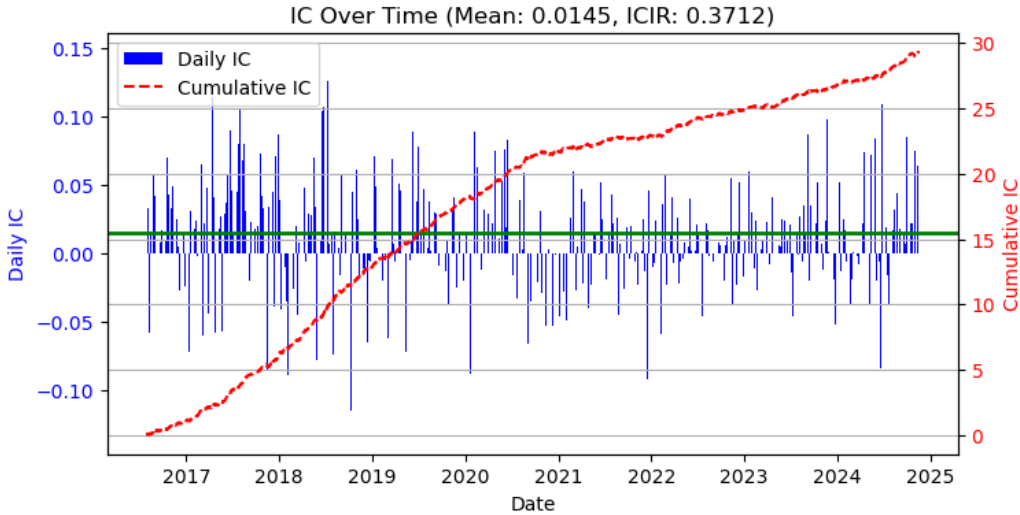
$$UTD = \frac{std(\text{最近20日的} TurnVol_{\text{中间盘}})}{mean(\text{最近20日的} TurnVol_{\text{中间盘}})}$$



	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.234352	-0.162721	-5.860204	-4.067605	0.238769
1	-0.254169	-0.120843	-6.769951	-3.219516	0.444420
2	-0.224058	-0.054516	-7.419570	-1.804400	0.565142
3	-0.218906	-0.019867	-8.883822	-0.806559	0.663462
4	-0.208734	0.013577	-9.389408	0.611895	0.741036
5	-0.202113	0.035479	-8.612078	1.520722	0.791973
6	-0.191841	0.049032	-7.484520	1.923644	0.802909
7	-0.158537	0.071742	-5.448070	2.479802	0.767596
8	-0.117894	0.078459	-3.924301	2.626766	0.654510
9	0.008800	0.110548	0.263506	3.317001	0.339160

时间差分UTD： 尾盘UTD

$$UTD = \frac{std(\text{最近20日的} TurnVol_{\text{尾盘}})}{mean(\text{最近20日的} TurnVol_{\text{尾盘}})}$$

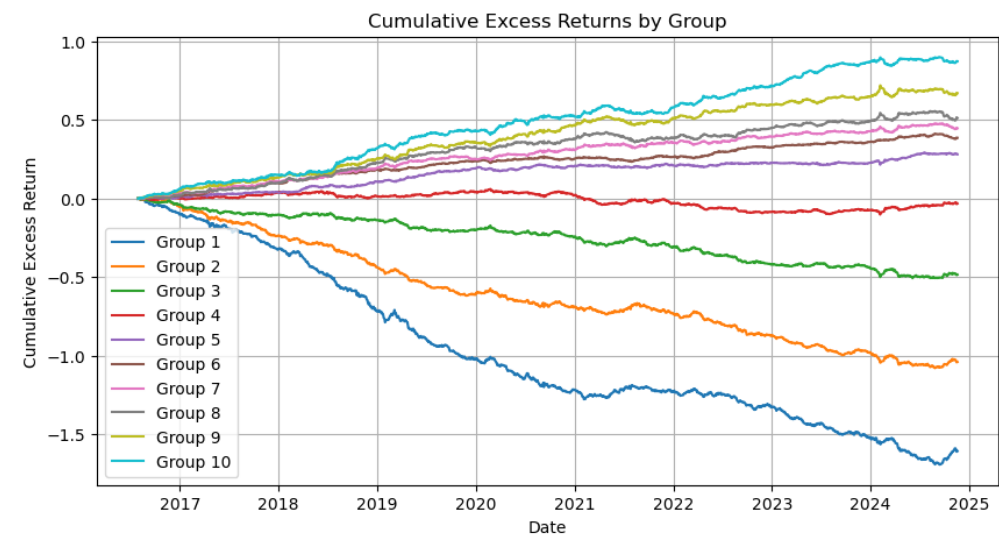
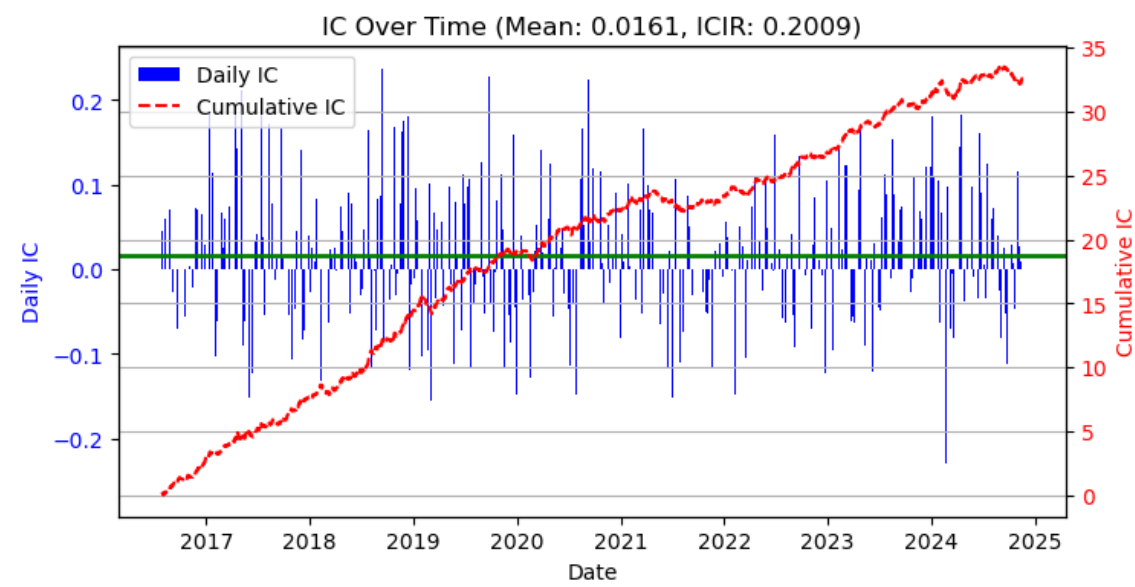


	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.250685	-0.178859	-7.491587	-5.355981	0.239421
1	-0.222867	-0.082897	-7.147665	-2.661494	0.466567
2	-0.206521	-0.021007	-7.790030	-0.796560	0.618380
3	-0.206637	0.016018	-9.124112	0.714205	0.742184
4	-0.218029	0.031142	-10.713231	1.537666	0.830569
5	-0.230814	0.033206	-11.332176	1.637935	0.880066
6	-0.234387	0.030725	-11.287347	1.488318	0.883704
7	-0.203137	0.047577	-8.459270	1.989663	0.835711
8	-0.160639	0.052129	-5.774349	1.876133	0.709226
9	-0.036810	0.072909	-1.122854	2.224511	0.365732

TurnVol_20_mean & TurnVol_20_std 的时间差分

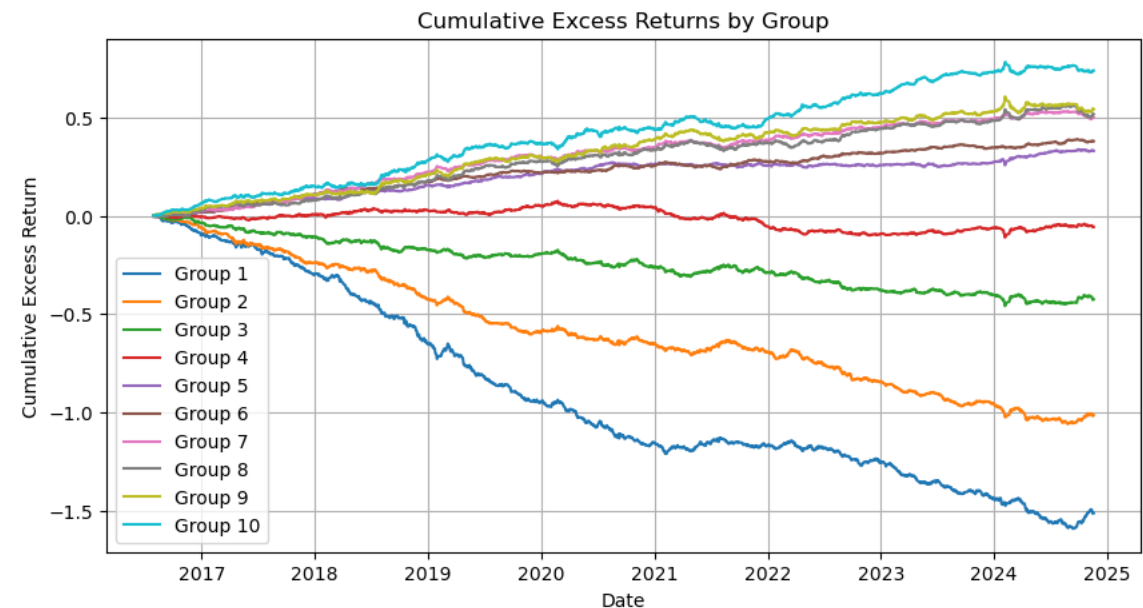
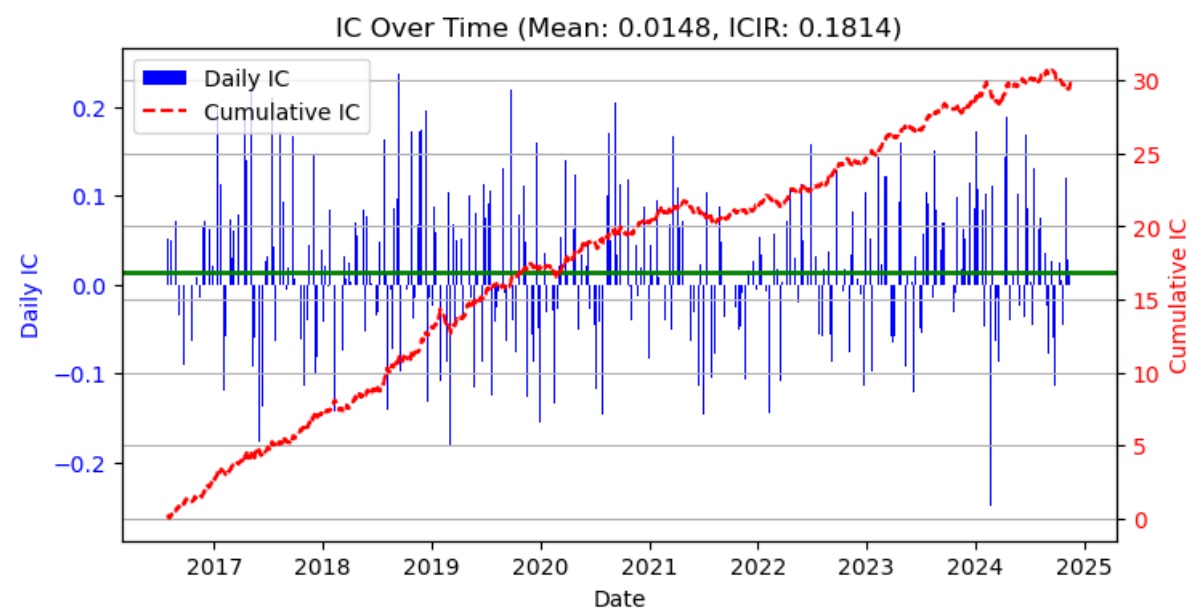
对比TurnVol_20_mean & TurnVol_20_std，时间差分的因子不使用全天的分钟数据，而是仅使用早盘半小时/尾盘半小时/其余时间的数据用于计算当日的换手率波动率

过去20日TurnVol的均值: TurnVol_20_mean



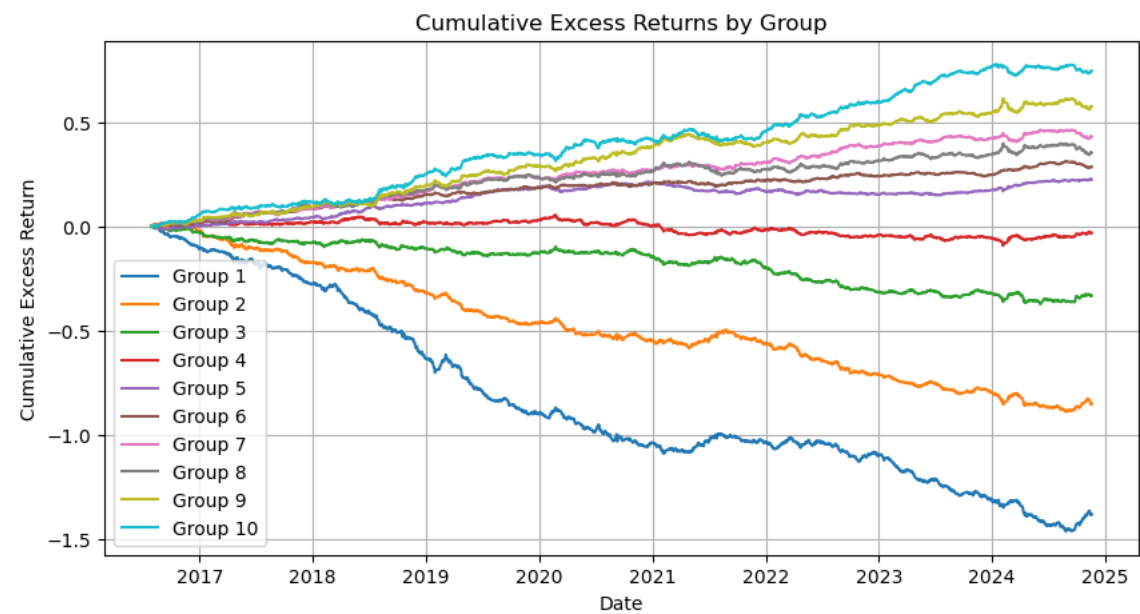
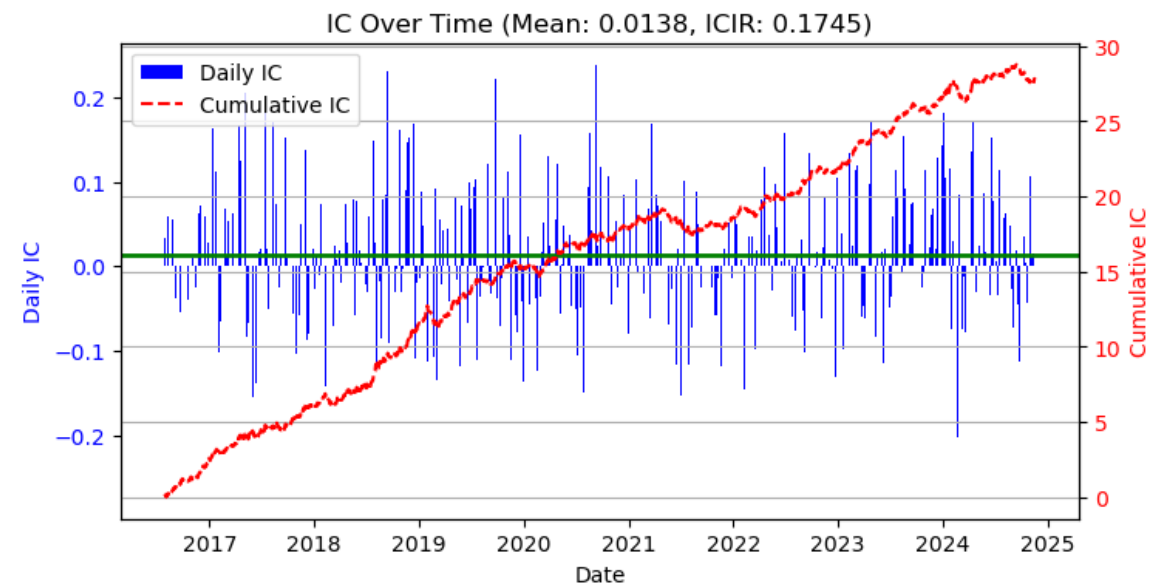
	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.237338	-0.199503	-3.692337	-3.102327	0.126116
1	-0.221746	-0.129067	-4.296444	-2.500106	0.308930
2	-0.179289	-0.060164	-4.359445	-1.464070	0.397083
3	-0.135760	-0.004003	-4.337786	-0.127921	0.439192
4	-0.100579	0.034844	-4.072830	1.414466	0.451410
5	-0.084680	0.047909	-3.592014	2.039646	0.441962
6	-0.069680	0.055475	-2.209445	1.763935	0.417183
7	-0.047302	0.063540	-1.223443	1.646816	0.369473
8	-0.001662	0.083208	-0.038975	1.952083	0.282902
9	0.073631	0.108332	1.703696	2.507097	0.115672

时间差分TurnVol_20_mean:早盘



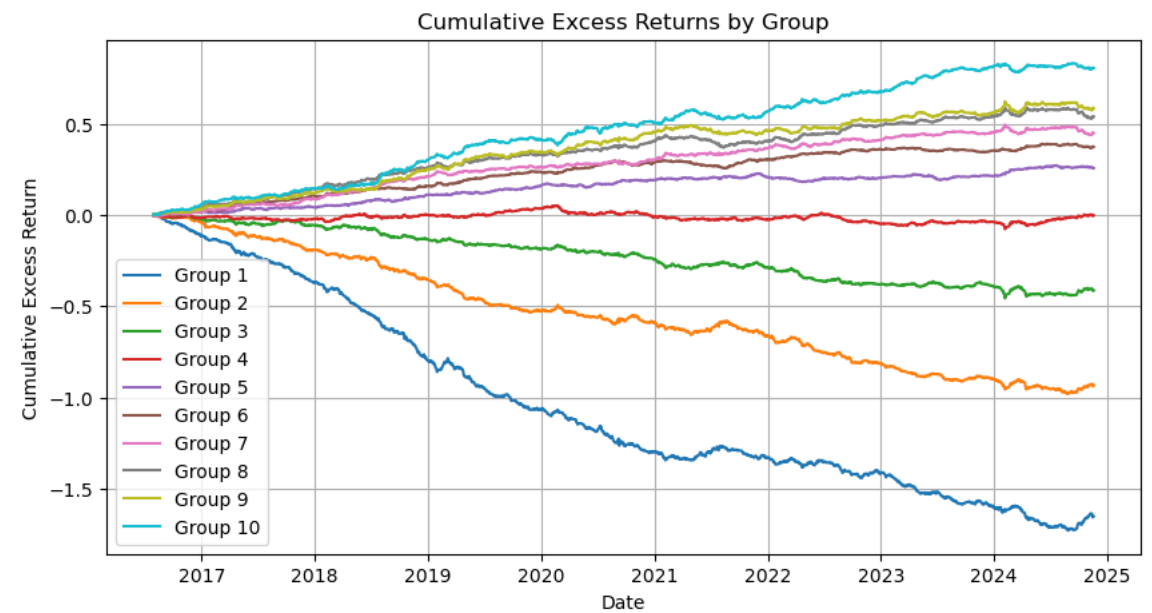
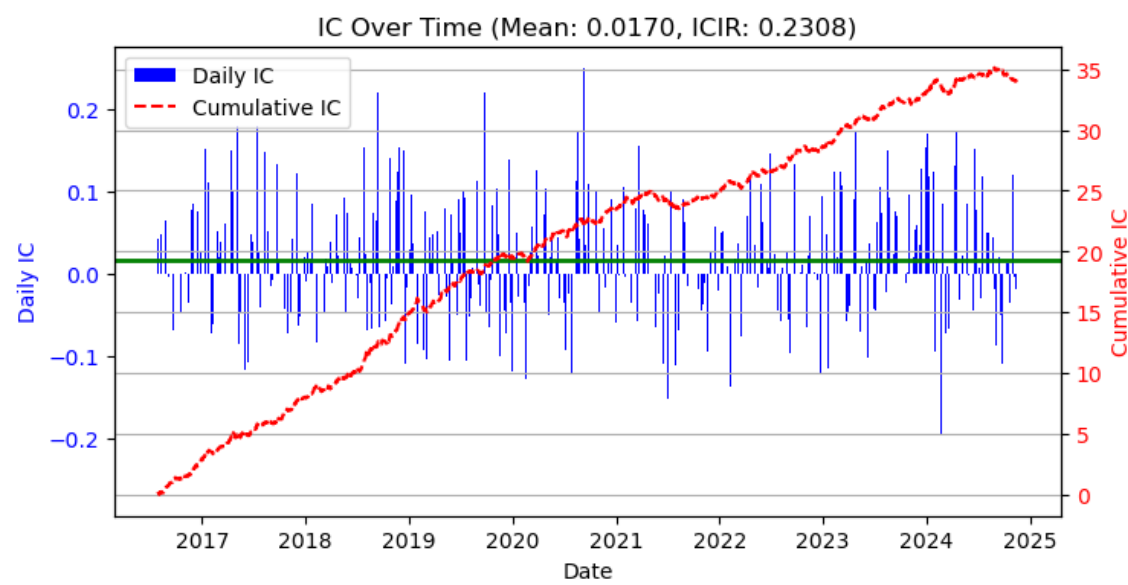
	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.229093	-0.187865	-3.655476	-2.997250	0.137427
1	-0.224604	-0.125908	-4.331626	-2.427686	0.328989
2	-0.179181	-0.052719	-4.104414	-1.208393	0.421538
3	-0.146854	-0.006973	-4.483828	-0.213130	0.466270
4	-0.103579	0.041082	-4.093869	1.627481	0.482204
5	-0.096350	0.047233	-4.084080	2.012860	0.478611
6	-0.075227	0.062195	-2.402164	1.990492	0.458073
7	-0.059394	0.064238	-1.523616	1.650891	0.412105
8	-0.029310	0.067442	-0.668458	1.539623	0.322507
9	0.051189	0.091847	1.135336	2.037374	0.135527

时间差分TurnVol_20_mean:中间盘



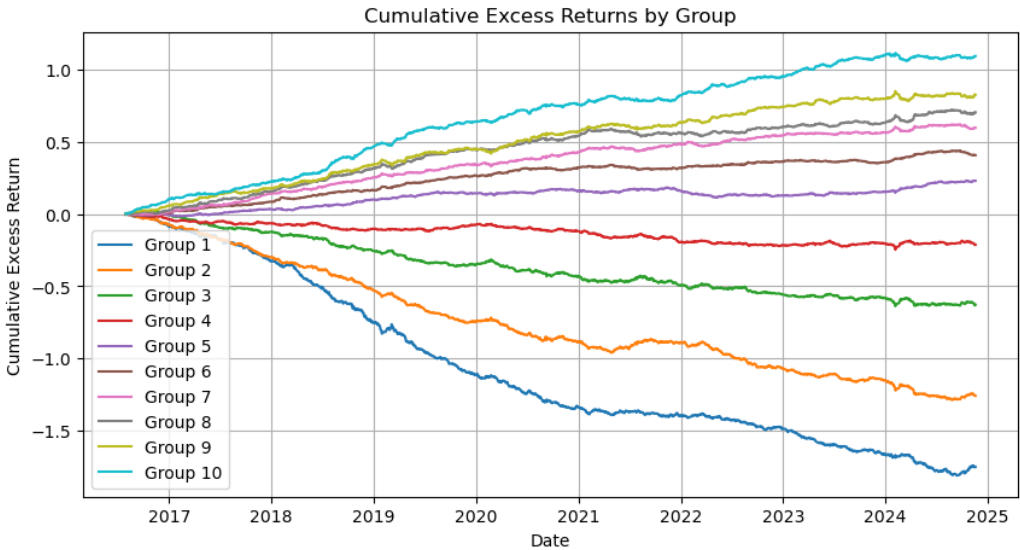
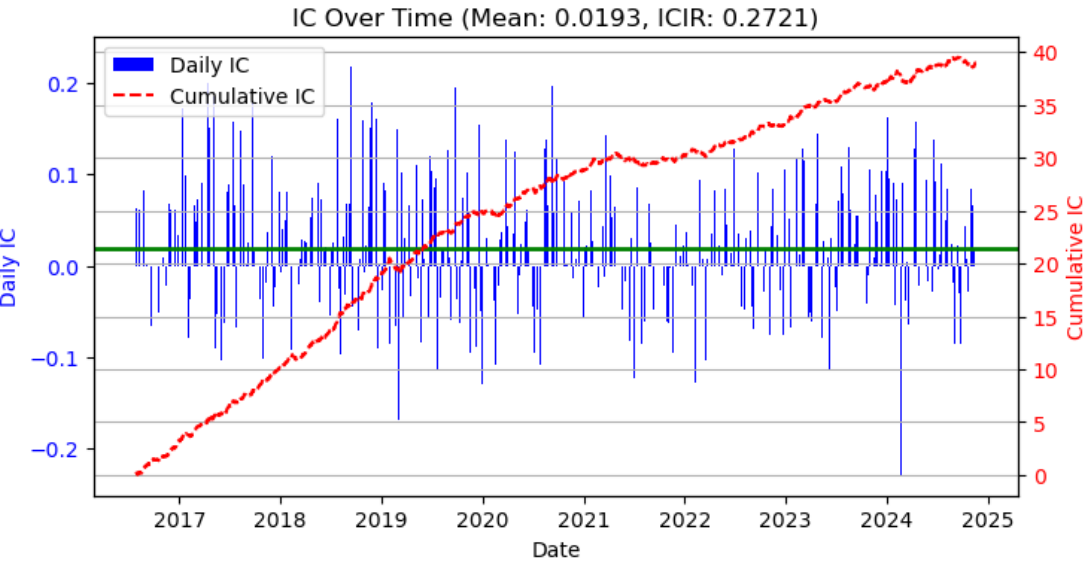
	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.210409	-0.171685	-3.320877	-2.708920	0.129080
1	-0.201191	-0.105952	-4.114732	-2.166873	0.317461
2	-0.164772	-0.041479	-4.120350	-1.038304	0.410976
3	-0.140906	-0.004123	-4.606857	-0.134819	0.455942
4	-0.113158	0.027793	-4.779603	1.177256	0.469836
5	-0.103189	0.035325	-4.321681	1.485036	0.461714
6	-0.077246	0.053204	-2.474049	1.707777	0.434832
7	-0.071097	0.043689	-1.852996	1.140586	0.382619
8	-0.015633	0.071389	-0.373538	1.707041	0.290072
9	0.057384	0.092468	1.336518	2.154468	0.116945

时间差分TurnVol_20_mean:尾盘



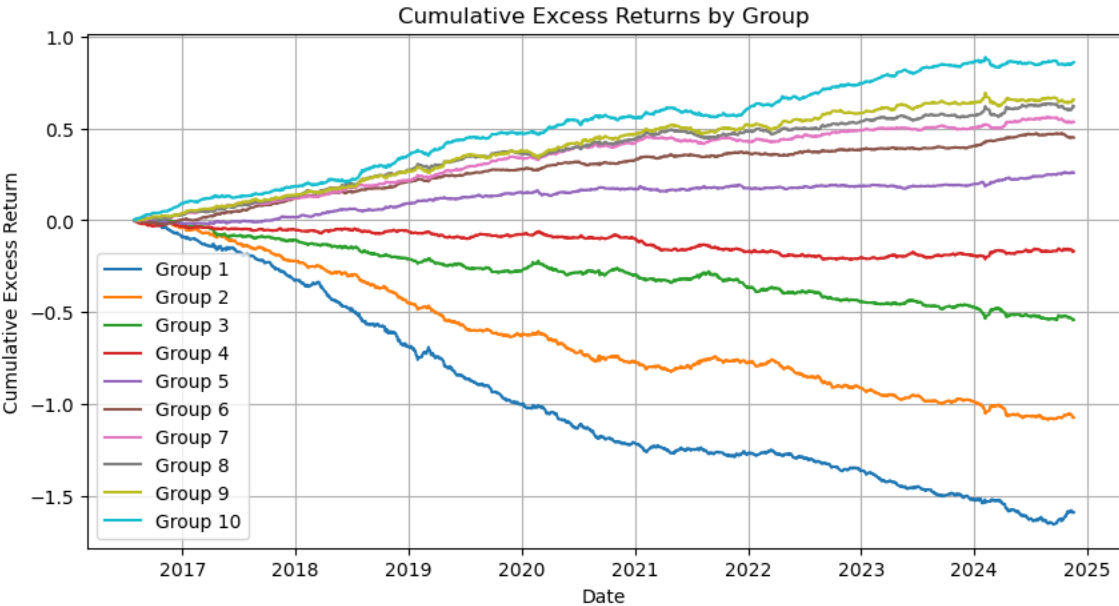
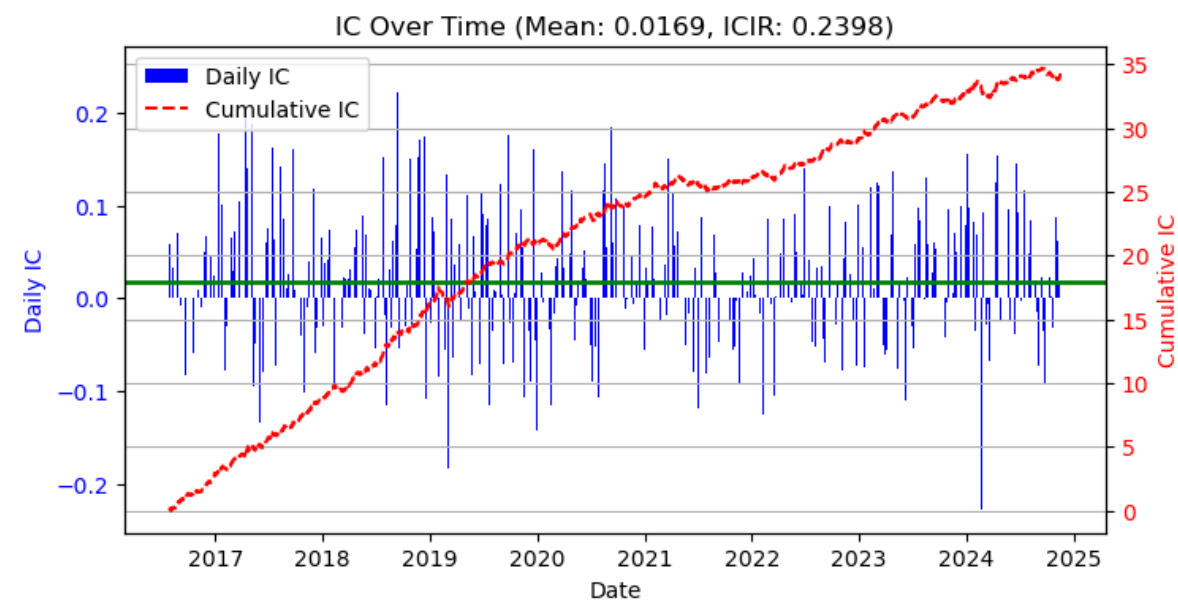
	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.243227	-0.204773	-4.085651	-3.438963	0.128180
1	-0.210953	-0.115791	-4.465810	-2.448476	0.317206
2	-0.176848	-0.051329	-4.406270	-1.277994	0.418396
3	-0.142366	-0.000301	-4.772737	-0.010076	0.473552
4	-0.116300	0.031794	-5.067104	1.389816	0.493646
5	-0.101135	0.046211	-4.281656	1.963042	0.491156
6	-0.085058	0.055683	-2.740608	1.800253	0.469136
7	-0.057777	0.066831	-1.569237	1.819465	0.415358
8	-0.022588	0.072421	-0.559941	1.798230	0.316698
9	0.061107	0.099857	1.466286	2.396907	0.129169

过去20日TurnVol的波动率: TurnVol_20_std



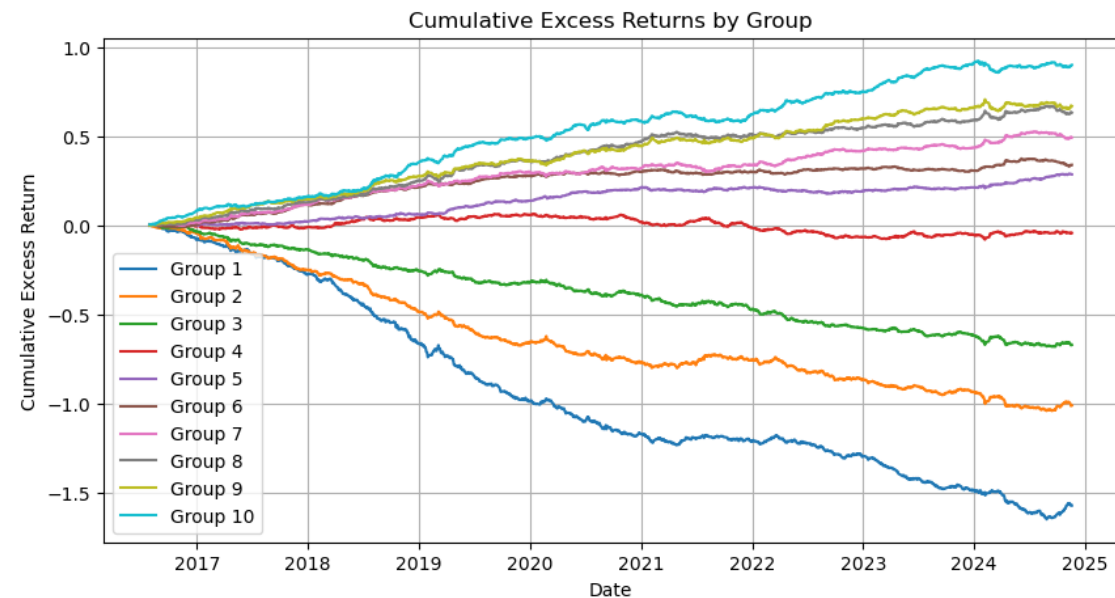
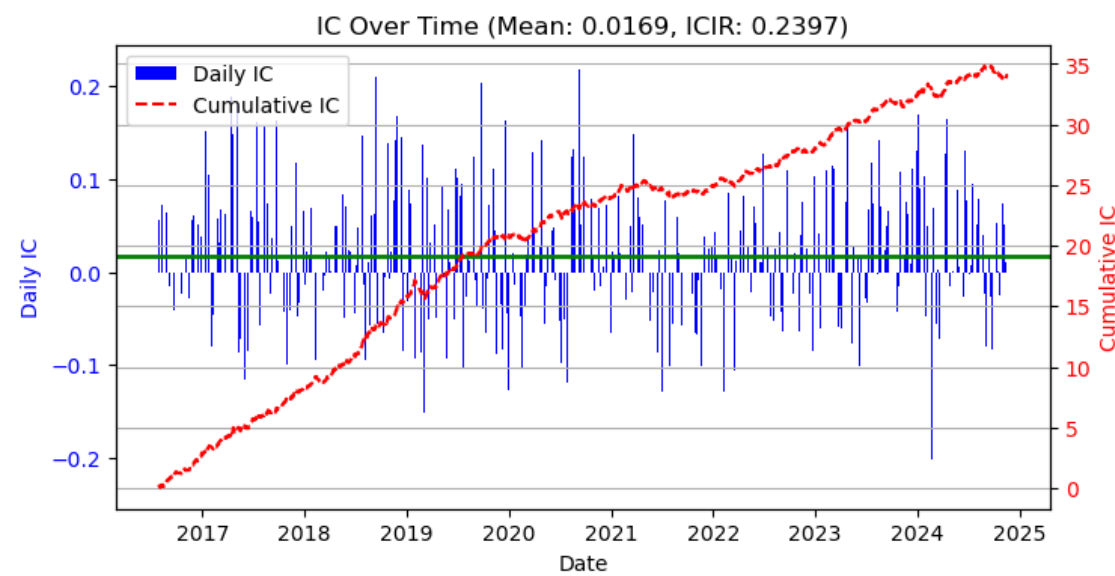
	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.265067	-0.217161	-4.611062	-3.775746	0.159688
1	-0.259613	-0.156084	-5.243985	-3.150069	0.345097
2	-0.206228	-0.077995	-4.879501	-1.843579	0.427442
3	-0.167949	-0.026412	-5.250764	-0.827053	0.471790
4	-0.121214	0.028465	-5.053659	1.192022	0.498929
5	-0.103281	0.050519	-4.164044	2.053803	0.512666
6	-0.078679	0.074043	-2.553769	2.416172	0.509074
7	-0.055685	0.087332	-1.512965	2.384811	0.476724
8	-0.017229	0.102358	-0.433552	2.580280	0.398624
9	0.078331	0.135607	2.004210	3.470888	0.190918

时间差分TurnVol_20_std:早盘



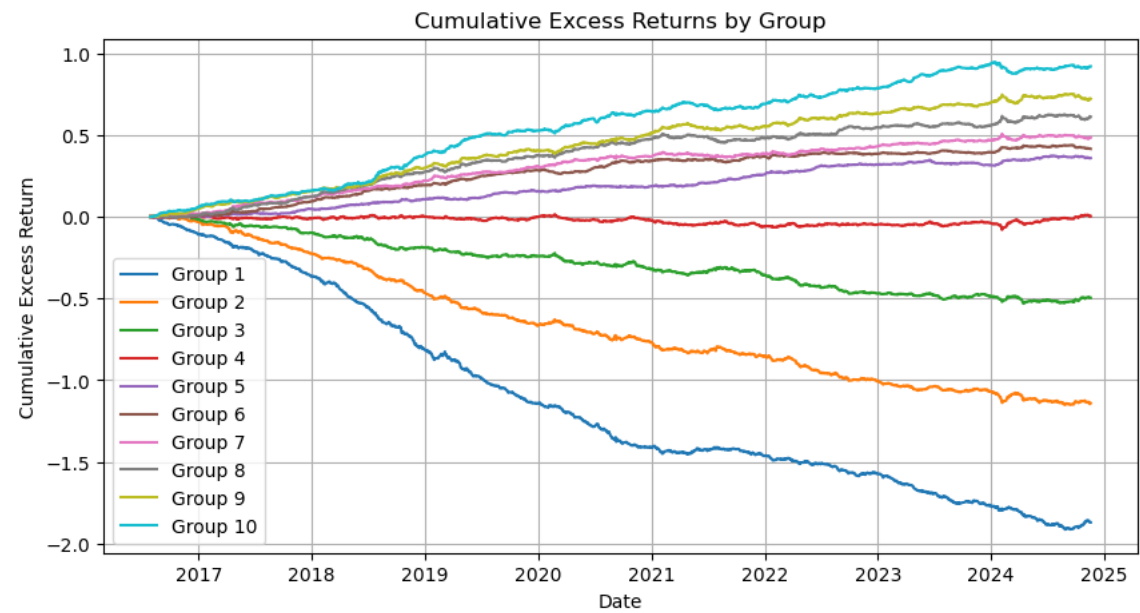
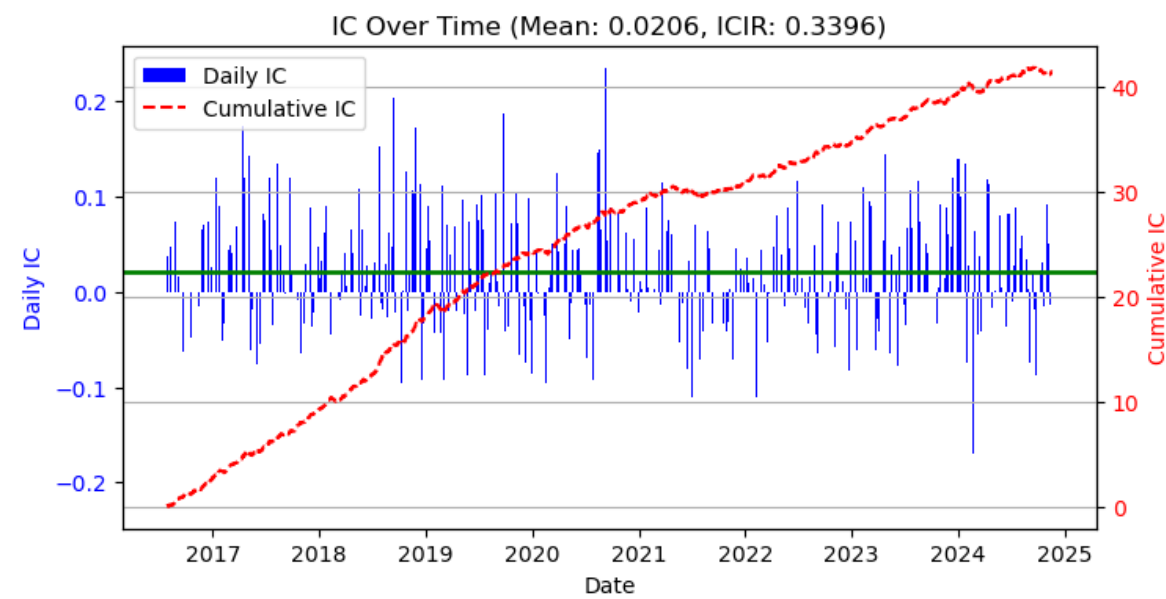
	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.246381	-0.197213	-4.479169	-3.583097	0.163894
1	-0.235620	-0.133130	-4.751824	-2.682836	0.341633
2	-0.192290	-0.067192	-4.457071	-1.557726	0.416993
3	-0.158432	-0.020954	-5.023683	-0.665714	0.458259
4	-0.113711	0.032109	-4.717624	1.340384	0.486065
5	-0.094400	0.055806	-3.848329	2.291242	0.500689
6	-0.083365	0.066452	-2.790755	2.242852	0.499390
7	-0.065973	0.076840	-1.791355	2.096731	0.476042
8	-0.039822	0.081360	-0.996271	2.041985	0.403941
9	0.046562	0.106587	1.180385	2.700540	0.200081

时间差分TurnVol_20_std:中间盘



	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.243707	-0.195402	-4.349959	-3.486196	0.161016
1	-0.227664	-0.125714	-4.593665	-2.536846	0.339832
2	-0.210129	-0.083508	-5.168481	-2.052439	0.422069
3	-0.146906	-0.005577	-4.909773	-0.186523	0.471096
4	-0.115188	0.035275	-4.928819	1.517775	0.501544
5	-0.113190	0.041907	-4.456153	1.665717	0.516990
6	-0.092853	0.061012	-2.953627	1.952896	0.512885
7	-0.066187	0.078325	-1.816934	2.160947	0.481708
8	-0.038073	0.082869	-0.993226	2.167213	0.403139
9	0.053559	0.111502	1.385462	2.886946	0.193146

时间差分TurnVol_20_std:尾盘



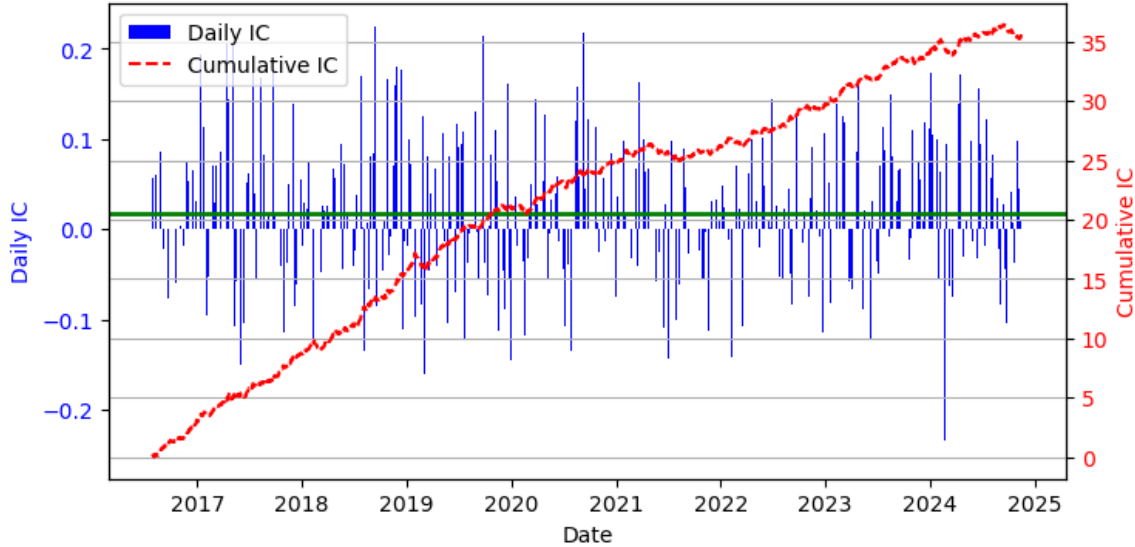
	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.281064	-0.231970	-5.747709	-4.741713	0.163644
1	-0.245245	-0.141558	-5.519739	-3.180184	0.345625
2	-0.194745	-0.061598	-5.177746	-1.635581	0.443824
3	-0.149956	0.000337	-5.150767	0.011577	0.500979
4	-0.115512	0.044490	-5.222835	2.023741	0.533341
5	-0.112611	0.051475	-4.703572	2.179222	0.546954
6	-0.102210	0.060103	-3.551655	2.111075	0.541041
7	-0.076719	0.075852	-2.308378	2.297859	0.508570
8	-0.037575	0.089504	-1.042821	2.496131	0.423597
9	0.052701	0.114092	1.438657	3.117426	0.204637

UTD衍生版

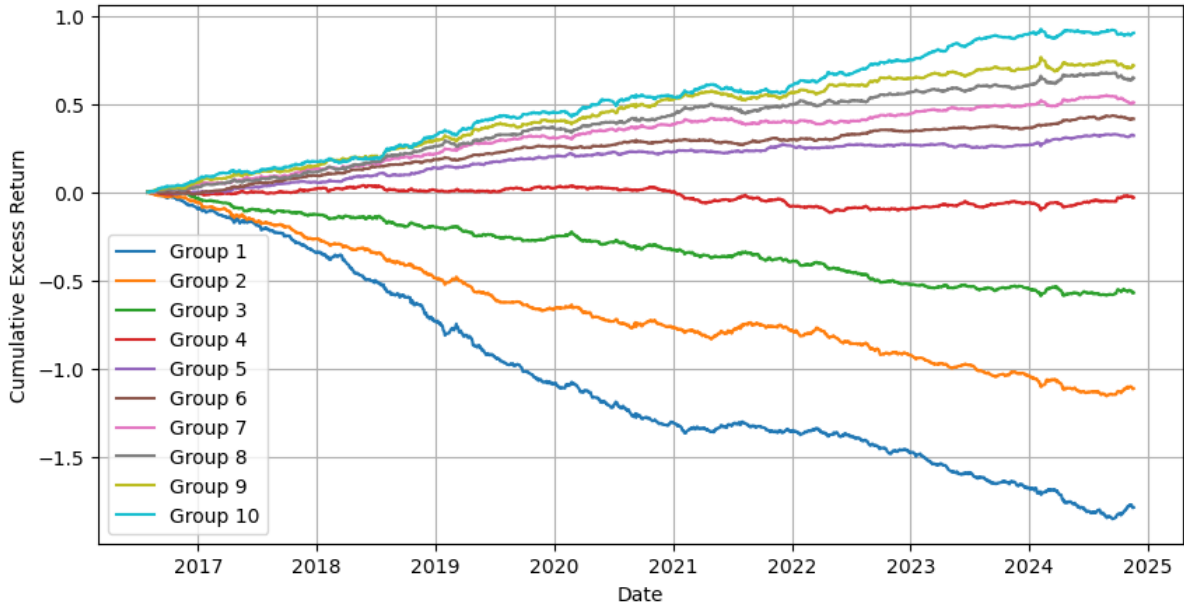
- 计算20日内的换手率波动率&20日内的换手率均值&二者的比

20日全天换手率波动率

IC Over Time (Mean: 0.0177, ICIR: 0.2257)

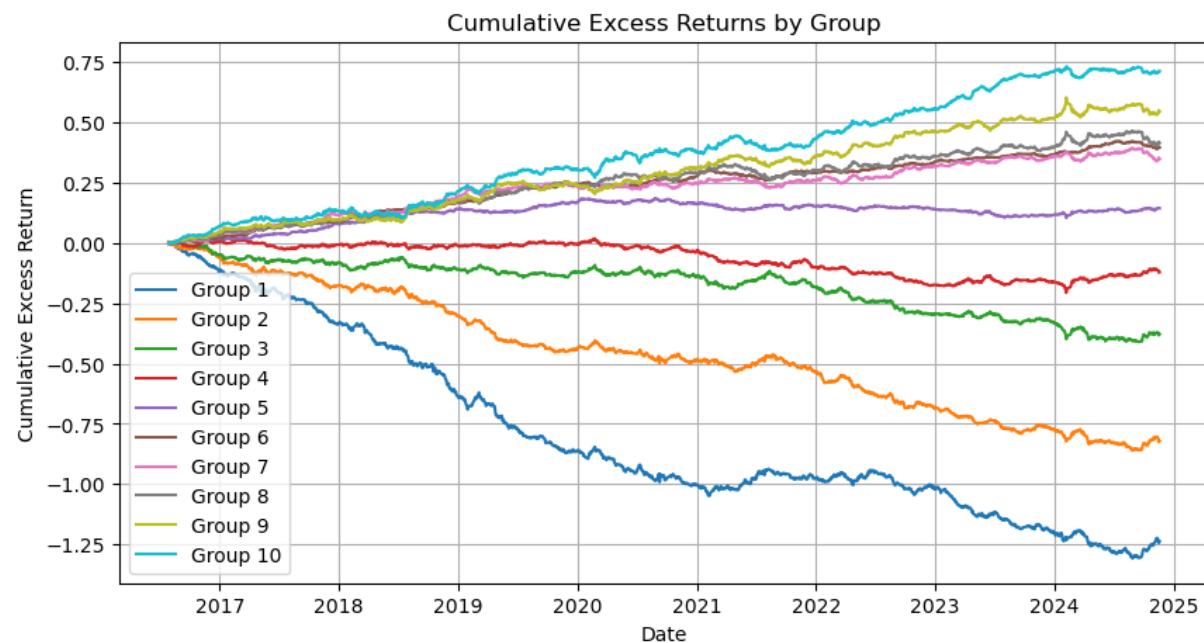
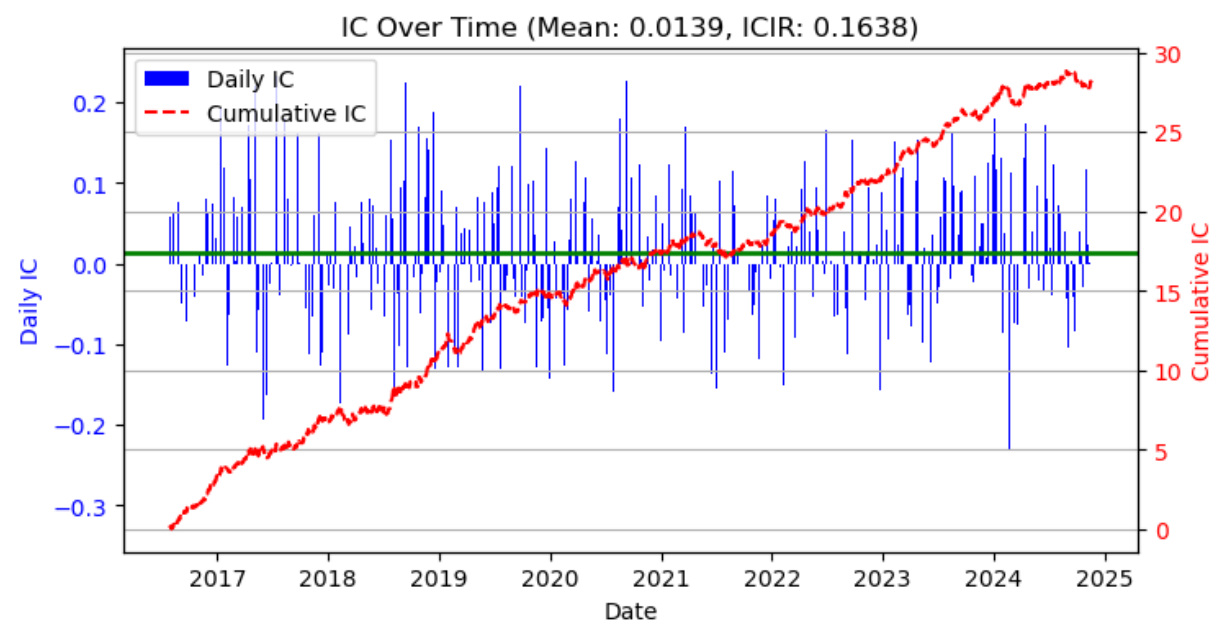


Cumulative Excess Returns by Group



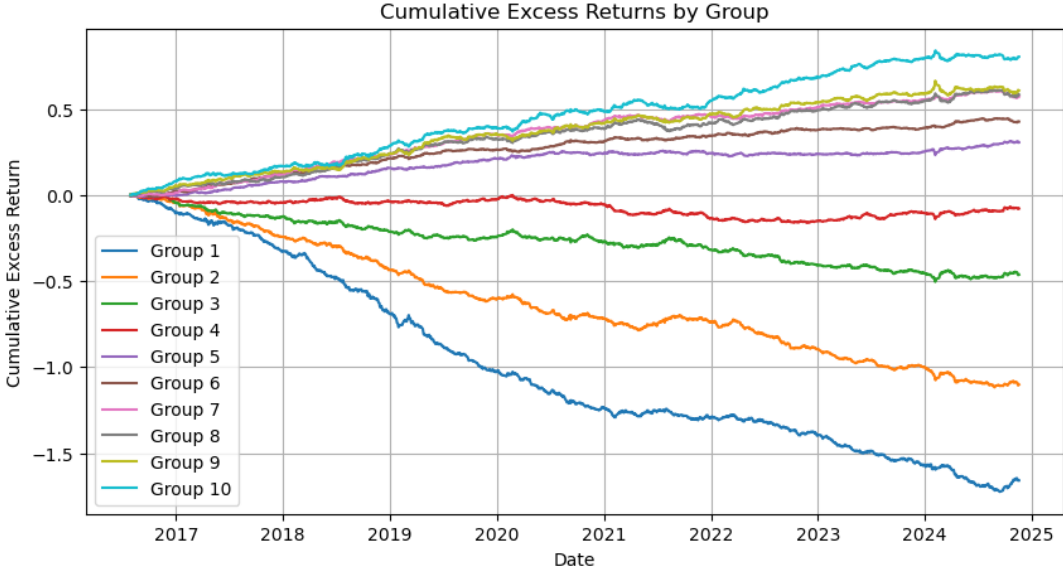
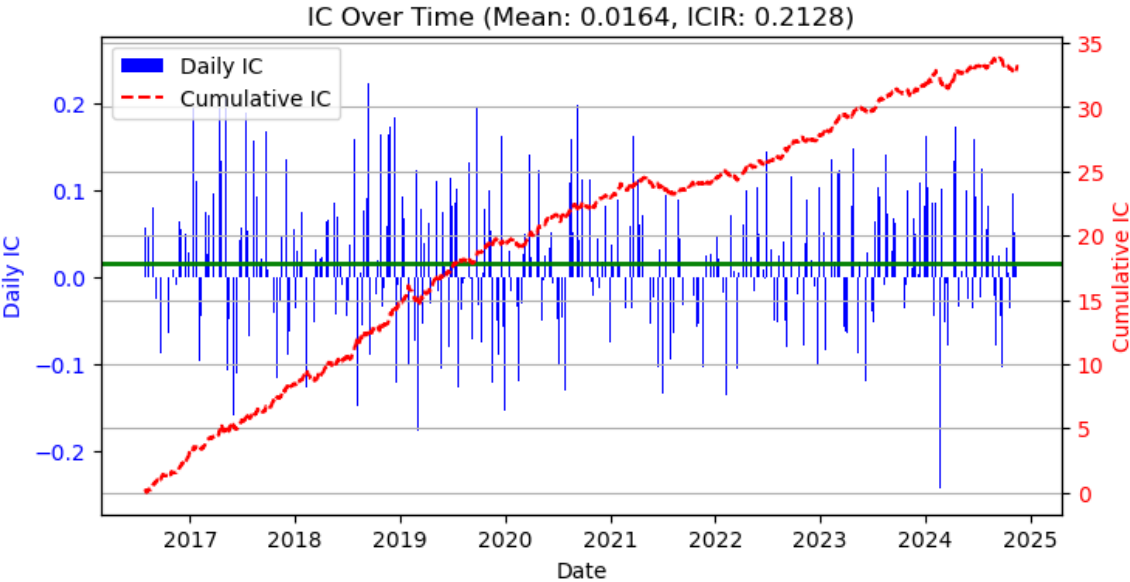
	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.262483	-0.221826	-4.260270	-3.599733	0.135522
1	-0.231324	-0.138155	-4.498044	-2.685809	0.310562
2	-0.187948	-0.070848	-4.471492	-1.687211	0.390332
3	-0.132551	-0.003939	-4.093112	-0.121724	0.428709
4	-0.093085	0.039687	-3.707676	1.587487	0.442571
5	-0.080118	0.051531	-3.305920	2.140553	0.438830
6	-0.062758	0.063004	-2.020645	2.033638	0.419207
7	-0.032920	0.080220	-0.875096	2.136585	0.377133
8	0.000197	0.088978	0.004624	2.083175	0.295936
9	0.074041	0.111947	1.721981	2.603757	0.126355

20日全天换手率均值



	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.189112	-0.153620	-2.969058	-2.411334	0.118305
1	-0.188039	-0.101870	-3.603376	-1.951437	0.287230
2	-0.156859	-0.046950	-3.509218	-1.051373	0.366363
3	-0.134405	-0.015019	-3.888428	-0.435157	0.397956
4	-0.103079	0.017822	-4.175643	0.722923	0.403003
5	-0.068776	0.049162	-2.952205	2.117484	0.393126
6	-0.067048	0.043316	-2.031583	1.313905	0.367880
7	-0.045174	0.051430	-1.080764	1.231053	0.322011
8	-0.005889	0.067701	-0.128370	1.475549	0.245301
9	0.058295	0.088496	1.245973	1.891377	0.100669

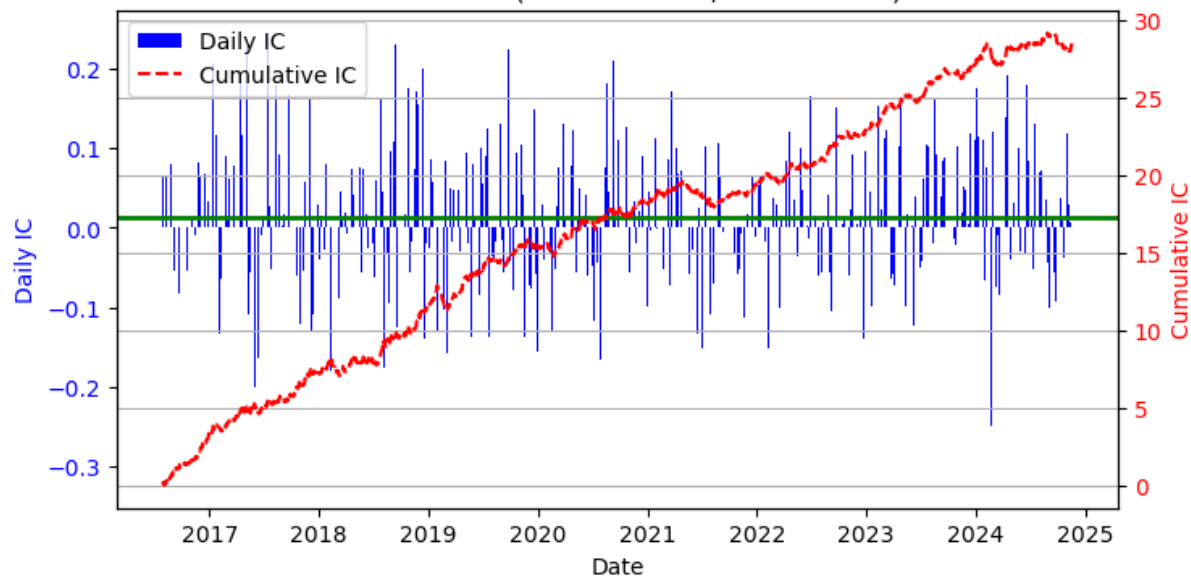
20日早盘换手率波动率



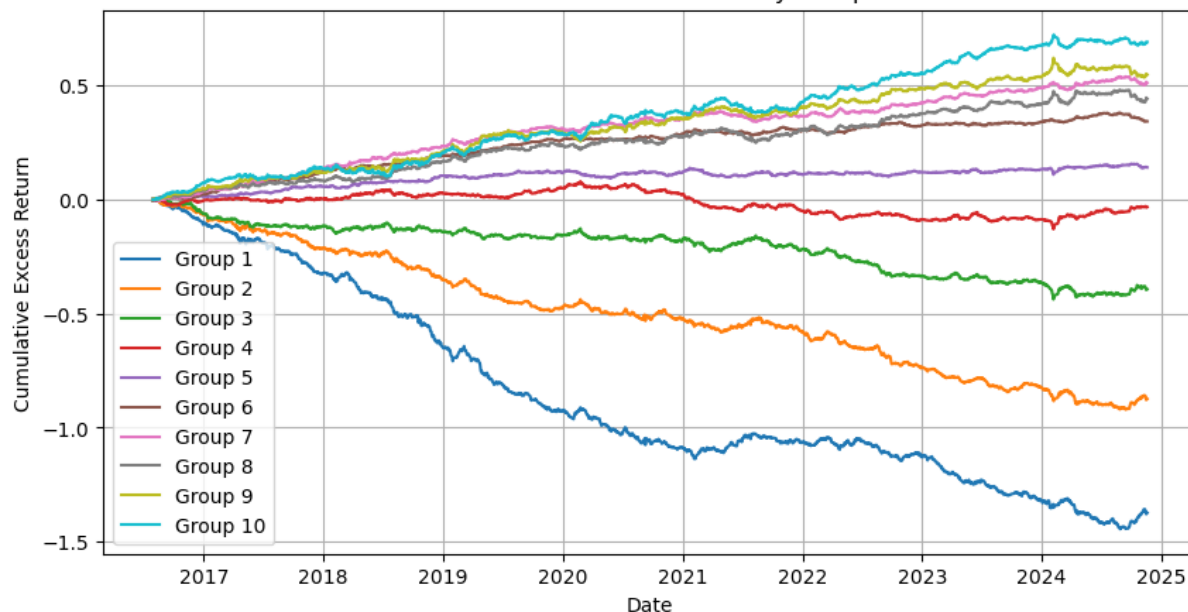
	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.250809	-0.205887	-4.256313	-3.492848	0.149741
1	-0.234880	-0.136672	-4.574089	-2.660869	0.327359
2	-0.178936	-0.057379	-4.053830	-1.300549	0.405191
3	-0.143033	-0.009693	-4.281758	-0.290257	0.444467
4	-0.100276	0.038071	-3.862038	1.472758	0.461157
5	-0.086226	0.053131	-3.534953	2.192510	0.464525
6	-0.064472	0.071028	-2.116047	2.341092	0.451667
7	-0.051619	0.072564	-1.375511	1.939164	0.413943
8	-0.025599	0.075496	-0.593443	1.750698	0.336984
9	0.053879	0.099908	1.218993	2.260187	0.153430

20日早盘换手率均值

IC Over Time (Mean: 0.0141, ICIR: 0.1631)

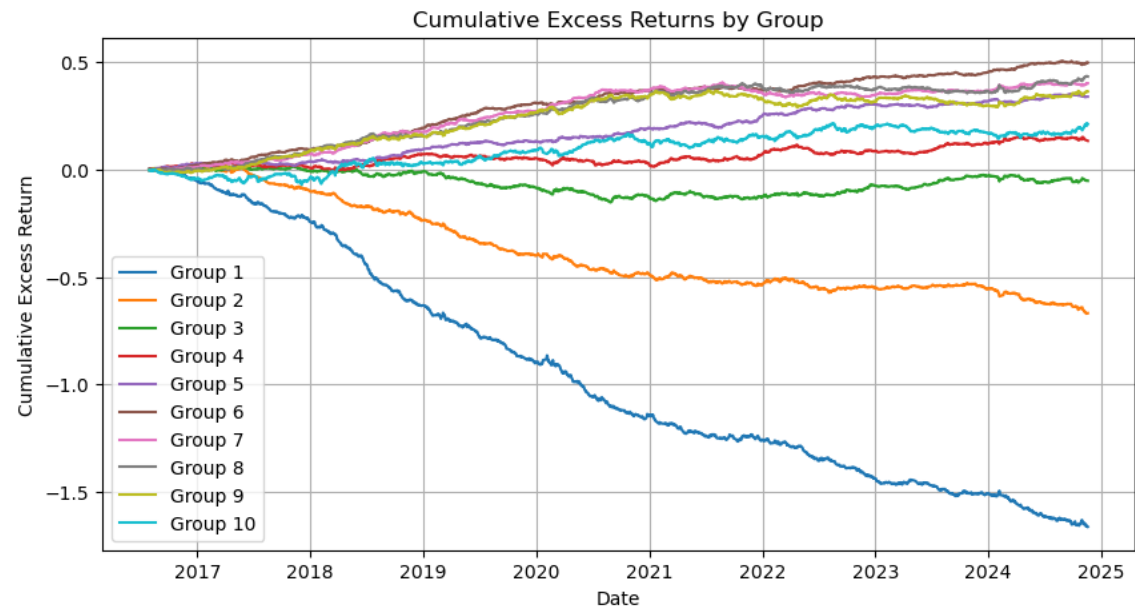
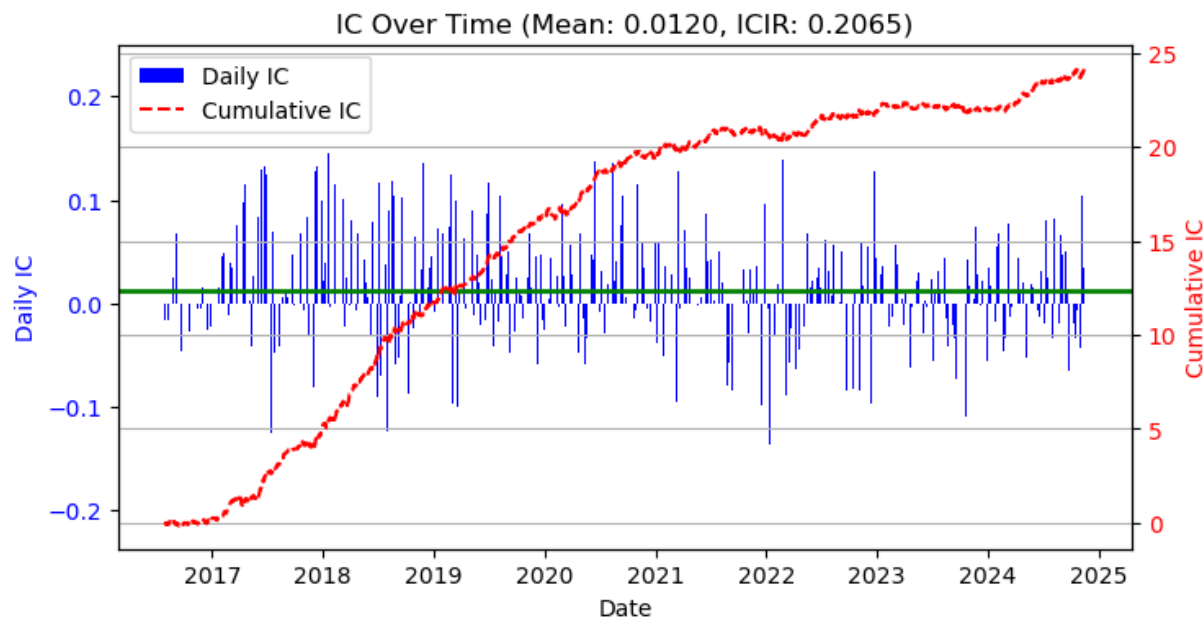


Cumulative Excess Returns by Group



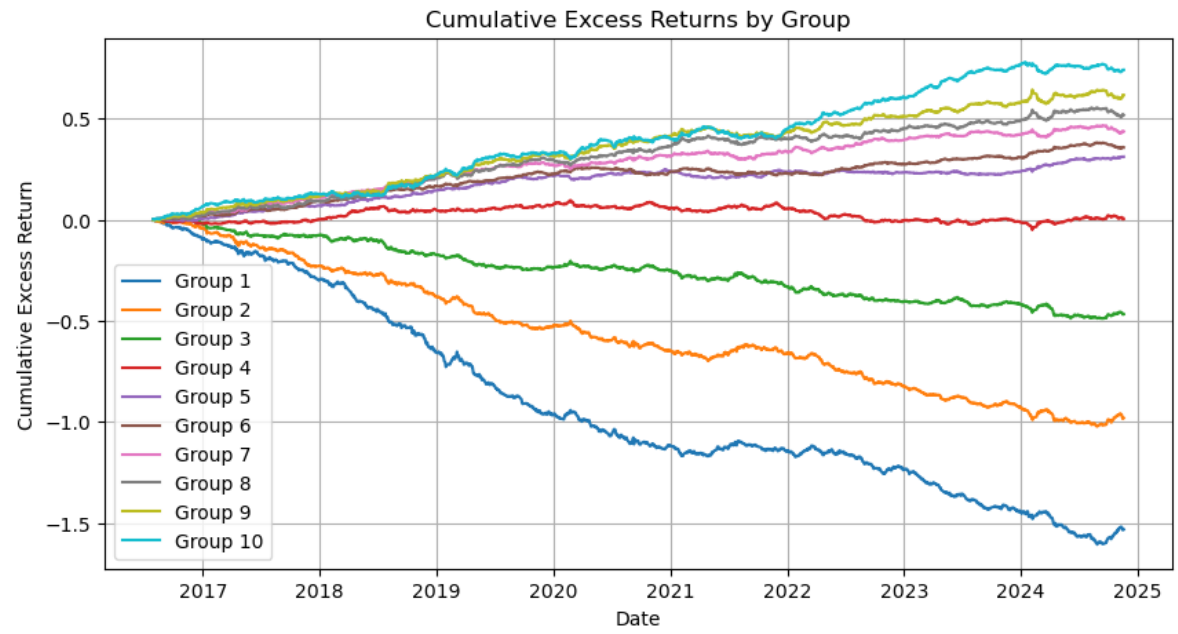
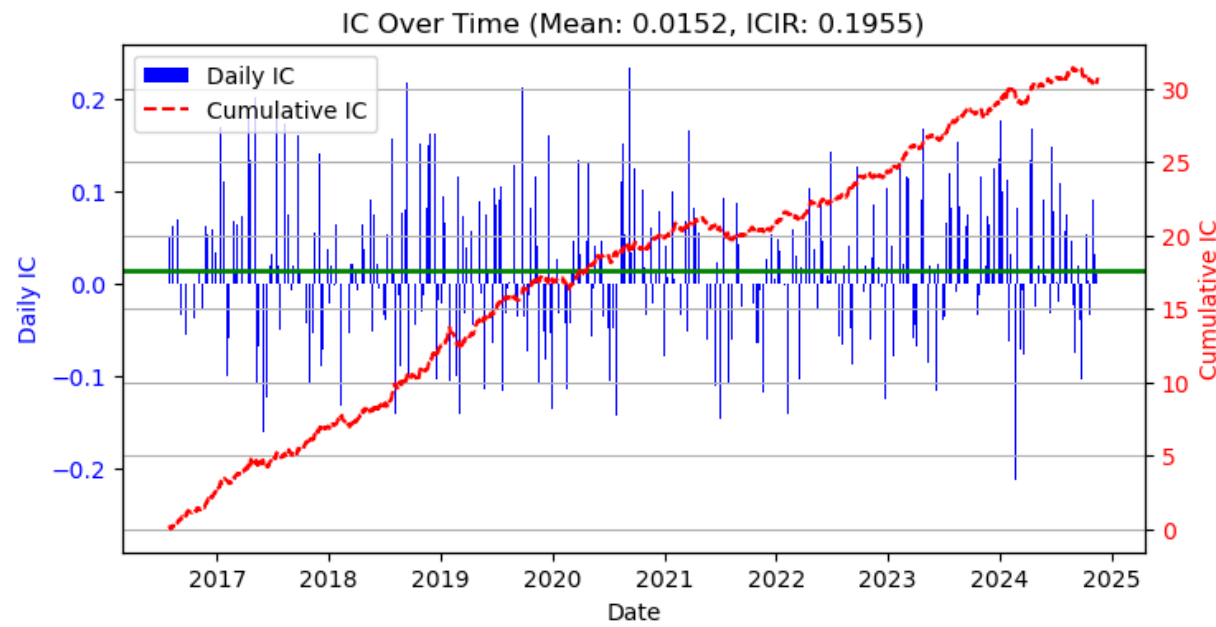
	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.209088	-0.170459	-3.259506	-2.657264	0.128765
1	-0.202624	-0.108436	-3.783814	-2.025023	0.313958
2	-0.168593	-0.048793	-3.667875	-1.062744	0.399333
3	-0.134456	-0.004037	-3.775597	-0.113460	0.434730
4	-0.115420	0.017519	-4.580130	0.697153	0.443130
5	-0.087298	0.042611	-3.632323	1.781615	0.433029
6	-0.058982	0.063538	-1.828861	1.972837	0.408398
7	-0.054163	0.054846	-1.285627	1.301796	0.363366
8	-0.016564	0.068002	-0.355080	1.457225	0.281887
9	0.050692	0.085782	1.054796	1.784545	0.116968

20日早盘换手率：std/AVG



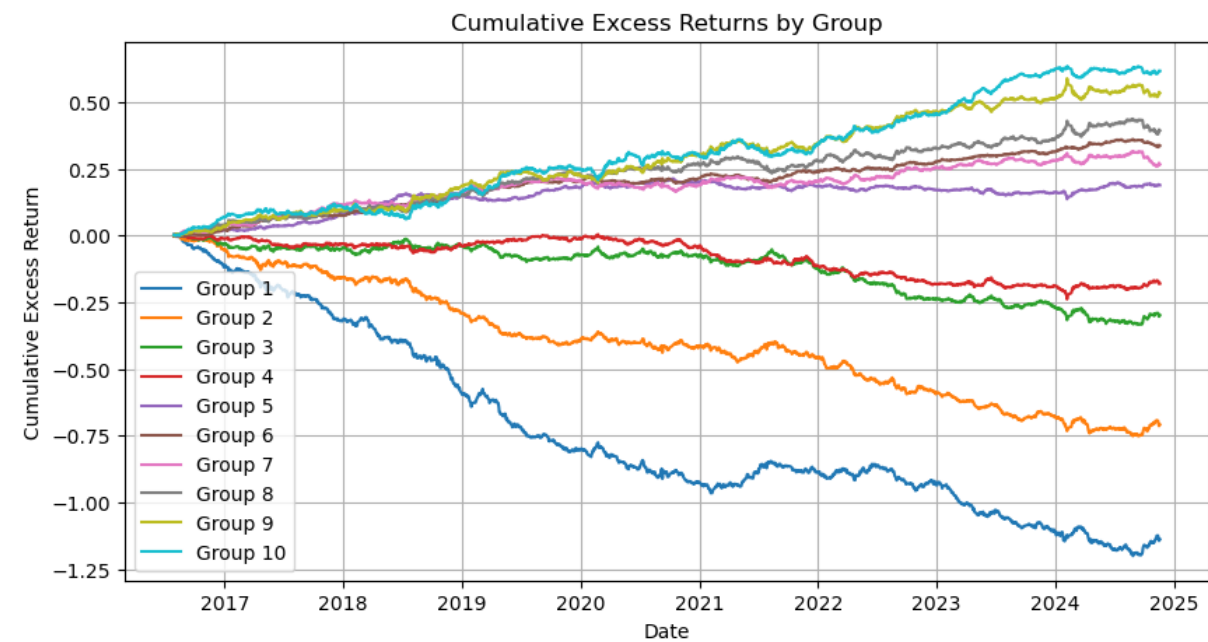
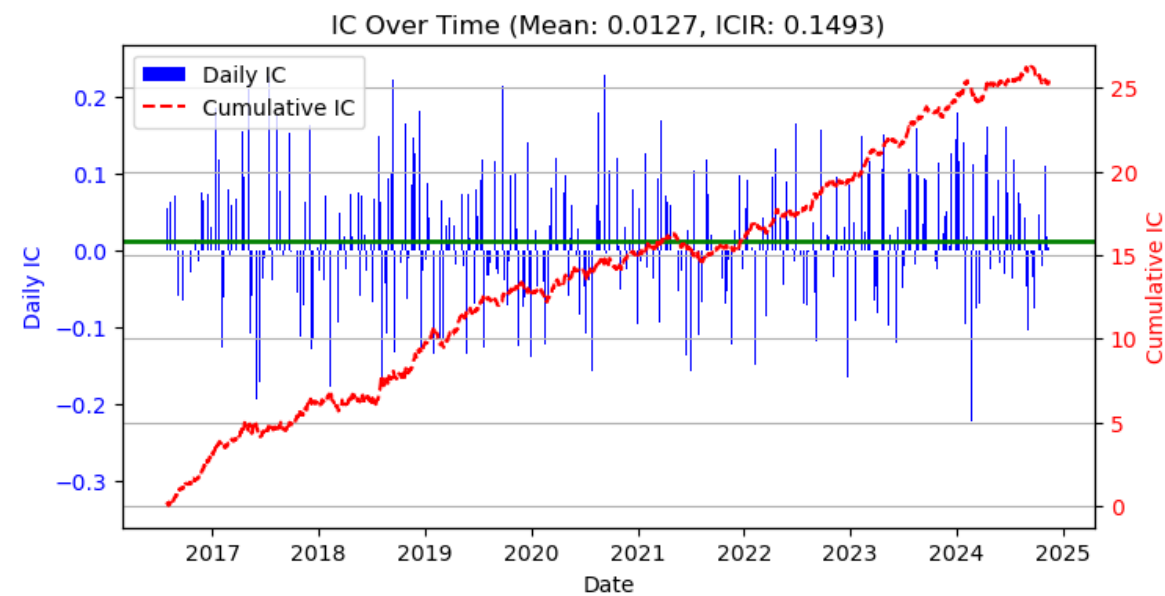
	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.270111	-0.206275	-5.545613	-4.231785	0.212786
1	-0.204230	-0.082853	-5.684527	-2.310084	0.404592
2	-0.161707	-0.006365	-5.093440	-0.201314	0.517806
3	-0.165961	0.016693	-5.953331	0.603647	0.608847
4	-0.160259	0.042204	-6.464624	1.717258	0.674875
5	-0.152901	0.061923	-6.783301	2.770415	0.716080
6	-0.166284	0.049960	-6.715906	2.030924	0.720815
7	-0.149723	0.053855	-4.841085	1.739961	0.678595
8	-0.124261	0.045152	-3.516887	1.275631	0.564709
9	-0.057617	0.026454	-1.177691	0.540459	0.280238

20日中间盘换手率波动率



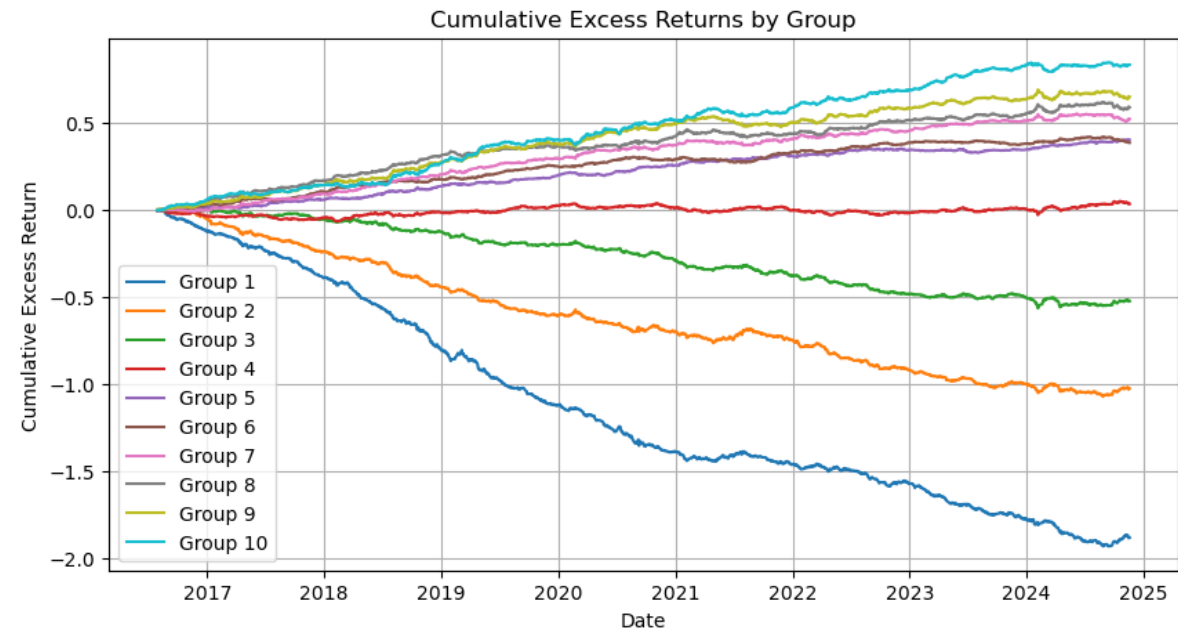
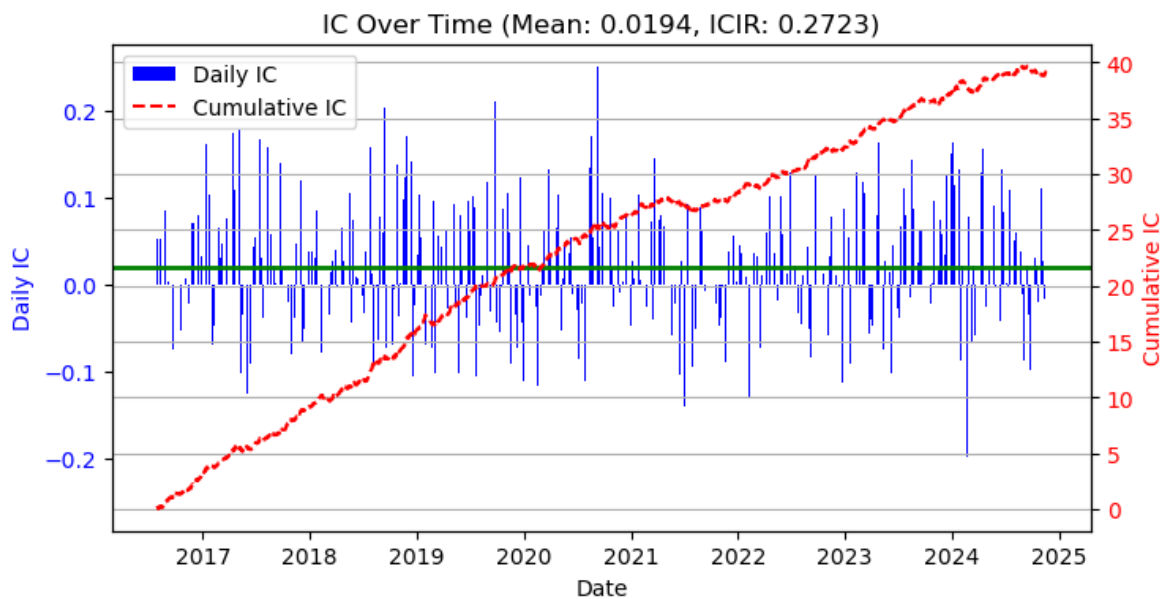
	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.231372	-0.190216	-3.772250	-3.099986	0.137186
1	-0.216150	-0.121779	-4.380857	-2.469030	0.314570
2	-0.176733	-0.058017	-4.304186	-1.413166	0.395719
3	-0.130766	0.000524	-4.226558	0.016971	0.437633
4	-0.097801	0.038667	-4.131584	1.640367	0.454891
5	-0.091590	0.044392	-3.723907	1.815000	0.453274
6	-0.075059	0.054232	-2.420121	1.753692	0.430973
7	-0.051778	0.064247	-1.381742	1.717714	0.386750
8	-0.014401	0.076541	-0.346384	1.840835	0.303138
9	0.053076	0.092026	1.239242	2.148346	0.129832

20日中间盘换手率均值



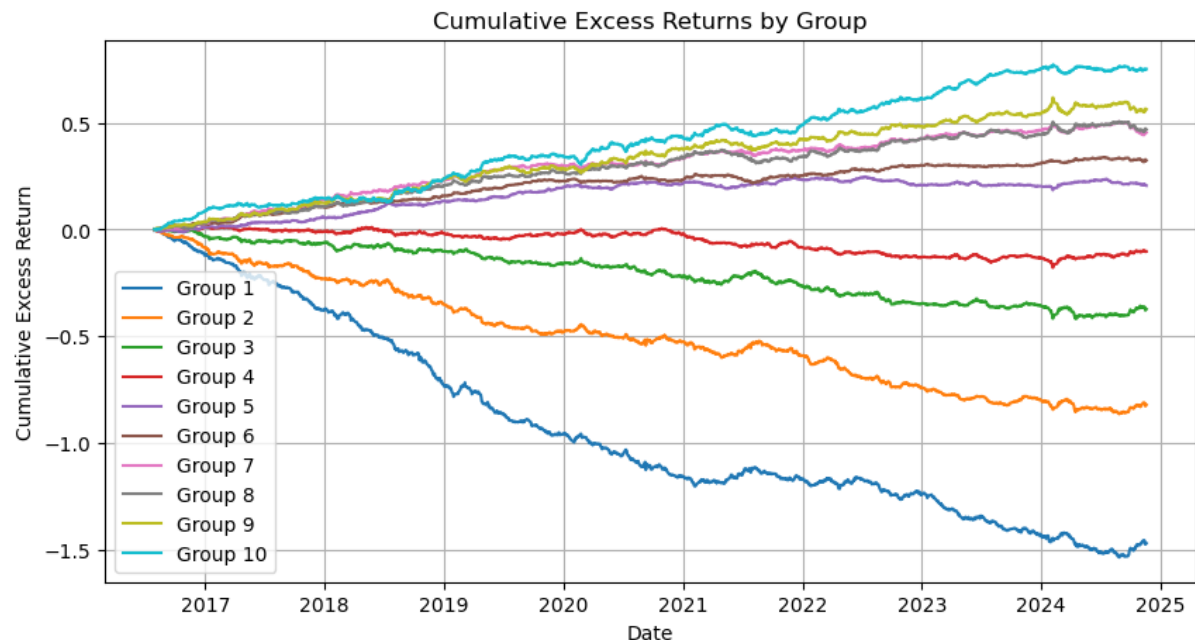
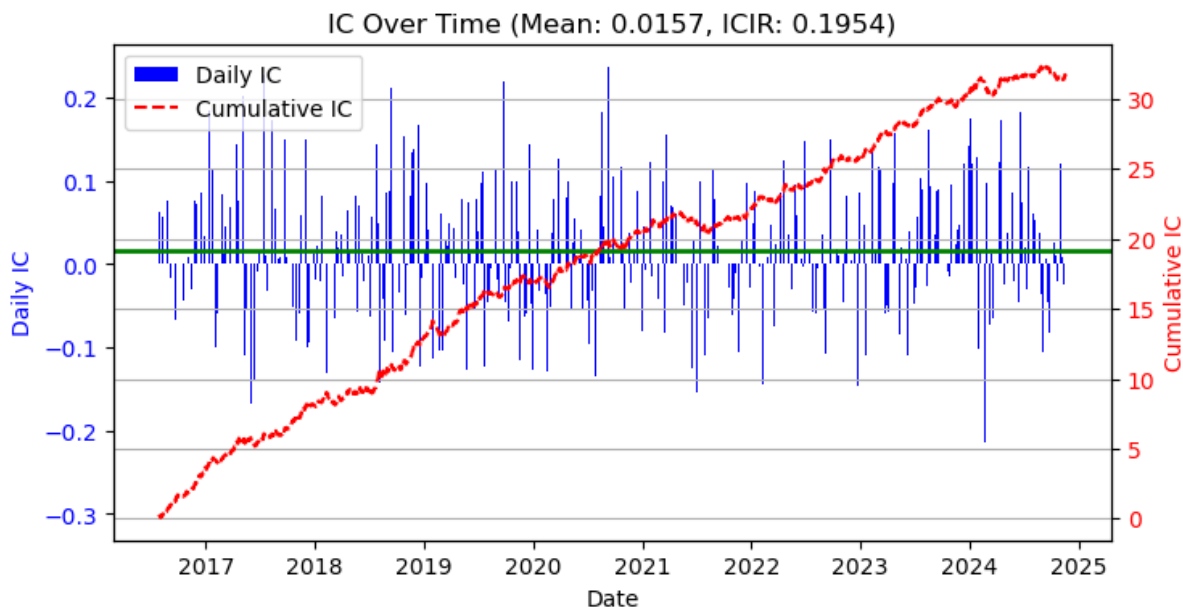
	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.177230	-0.141301	-2.790831	-2.224418	0.119764
1	-0.175584	-0.087974	-3.388761	-1.697258	0.292034
2	-0.149374	-0.037105	-3.382798	-0.841191	0.374233
3	-0.145082	-0.022399	-4.207696	-0.650835	0.408945
4	-0.101287	0.023311	-4.156001	0.956894	0.415325
5	-0.080031	0.041691	-3.427916	1.791813	0.405738
6	-0.081211	0.032988	-2.480413	1.008263	0.380665
7	-0.050887	0.048719	-1.211149	1.160246	0.332020
8	-0.009514	0.066141	-0.207963	1.445803	0.252183
9	0.045278	0.076450	0.965873	1.630861	0.103908

20日尾盘换手率波动率



	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.274867	-0.233447	-4.882439	-4.146037	0.138066
1	-0.222072	-0.127044	-4.639551	-2.653081	0.316760
2	-0.186980	-0.064801	-4.698461	-1.628132	0.407261
3	-0.131378	0.004513	-4.400044	0.151400	0.452969
4	-0.092066	0.050104	-3.974123	2.175879	0.473900
5	-0.094077	0.048208	-3.965949	2.049279	0.474282
6	-0.071903	0.065078	-2.371643	2.157856	0.456605
7	-0.051136	0.073387	-1.419280	2.043606	0.415075
8	-0.017505	0.080920	-0.441914	2.044981	0.328085
9	0.060939	0.103773	1.471268	2.506835	0.142781

20日尾盘换手率均值



	net_excess_return	gross_excess_return	sharpe_net	sharpe_gross	turnover_rate
quantile					
0	-0.218129	-0.182133	-3.563181	-2.974240	0.119987
1	-0.190390	-0.101719	-3.774597	-2.015356	0.295570
2	-0.161222	-0.046177	-3.719948	-1.066275	0.383482
3	-0.139800	-0.012721	-4.279903	-0.389528	0.423595
4	-0.104854	0.025555	-4.316977	1.055251	0.434698
5	-0.088536	0.040186	-3.663316	1.667498	0.429073
6	-0.065165	0.056370	-2.016168	1.746875	0.405119
7	-0.048967	0.058118	-1.211961	1.439610	0.356949
8	-0.011946	0.069846	-0.270247	1.580657	0.272639
9	0.059617	0.093255	1.319300	2.063912	0.112126