实习生周报

崔晏菲 带教：曾思杰

1. 近期小结

   1.1 基于量价数据，写了 3 个因子

2 近期所写因子

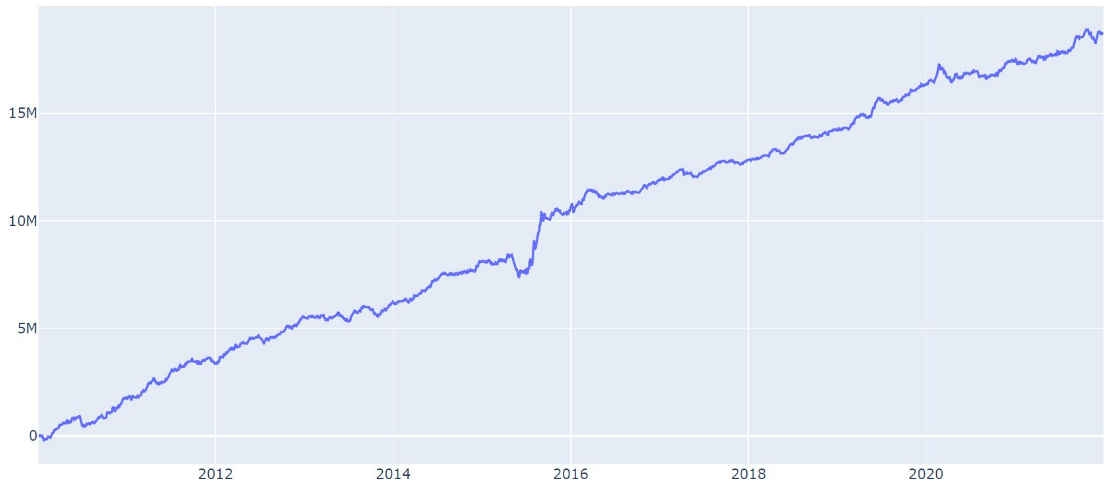
2.1 Alpha.OvernightKurt2

2.1.1 因子思路

2.1.1.1 计算每只股票过去 10 天的隔夜收益率，计算其过去十天的均值的 rank，做空 rank 大的，做多 rank 小的。再乘以这十天隔夜收益率的峰度作为调整系数。

2.1.2 因子表现

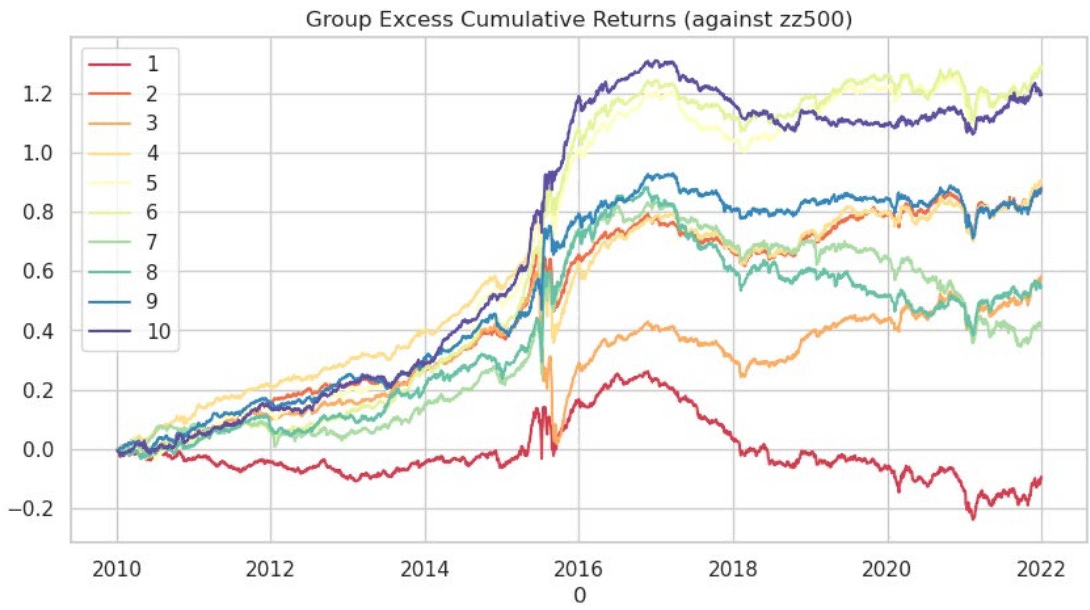
2.1.2.1 PnL



2.1.2.2 SimSummary

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	fitness	ddStart	ddEnd
20100104-20101231	10.00	-10.00	1.821	18.35	14.06	2.65(0.17)	5.64	0.58	3.03	20100622	20100713
20110104-20111230	10.00	-10.00	1.532	15.19	12.62	2.35(0.15)	3.40	0.58	2.58	20110425	20110512
20120104-20121231	10.00	-10.00	2.171	21.62	12.38	3.67(0.24)	3.63	0.62	4.85	20120627	20120718
20130104-20131231	10.00	-10.00	0.709	7.21	11.18	1.33(0.09)	5.20	0.53	1.07	20130904	20131030
20140102-20141231	10.00	-10.00	1.868	18.45	10.91	3.49(0.22)	1.96	0.58	4.54	20140221	20140305
20150105-20151231	10.00	-10.00	2.496	24.75	20.94	1.87(0.12)	10.96	0.54	2.03	20150420	20150602
20160104-20161230	10.00	-10.00	1.300	12.89	13.92	2.12(0.14)	4.50	0.56	2.04	20160108	20160113
20170103-20171229	10.00	-10.00	0.934	9.27	10.29	1.78(0.11)	3.63	0.57	1.69	20170407	20170605
20180102-20181228	10.00	-10.00	1.423	14.17	11.74	3.07(0.20)	2.67	0.58	3.37	20180425	20180516
20190102-20191231	10.00	-10.00	2.112	20.95	12.68	3.72(0.24)	3.30	0.63	4.78	20190624	20190729
20200102-20201231	10.00	-10.00	1.089	10.85	13.47	1.29(0.08)	8.95	0.58	1.15	20200226	20200415
20210104-20211231	10.00	-10.00	1.302	12.97	13.52	1.76(0.11)	6.77	0.58	1.73	20211028	20211129
20100104-20211231	10.00	-10.00	18.757	15.57	13.15	2.20(0.14)	10.96	0.58	2.40	20150420	20150602

2.1.2.3 十分组图



2.1.2.4 和风格因子的相关性

```
/home/cuiyf/myalphasim/Basic/pnl:
    alpha.20dr                   : 0.177028
    alpha.5dr                    : 0.131824
    alpha.CorrCloseAmount        : 0.020613
    alpha.MeanAmount             : -0.120826
/home/cuiyf/myalphasim/Barra/pnl:
    alpha.BarraBeta              : 0.161085
    alpha.BarraLiquidity         : 0.076669
    alpha.BarraResidualVolatility: -0.065644
    alpha.BarraNonLinearSize     : -0.091966
    alpha.BarraSize              : -0.093077
    alpha.BarraMomentum          : -0.262061
```

2.1.2.5 和因子库的相关性

```
/usr/local/bin/bcorr:5: DeprecationWarnir
  from scipy.stats.stats import pearsonr
+0.201956  /data/share/poolpnl/df9e2e41
+0.202882  /data/share/poolpnl/d1c7b340
+0.212674  /data/share/poolpnl/18faa22c
+0.212873  /data/share/poolpnl/c695dd16
+0.219063  /data/share/poolpnl/b714cfdf
+0.235674  /data/share/poolpnl/5d0b4c06
+0.246088  /data/share/poolpnl/9655f51a
+0.250062  /data/share/poolpnl/a61943a0
+0.271248  /data/share/poolpnl/1fcca290
+0.280597  /data/share/poolpnl/03391994
```

2.1.3 因子讨论

2.1.3.1 这个因子表现很不错。为了避免抓住连续涨跌停的股票，我已经将前一天的涨跌停股票过滤掉了，过滤前的收益率还要翻倍。

2.1.3.2 根据十分组图，这个因子的线性度也不错。

2.2 Alpha.UpDownCorr

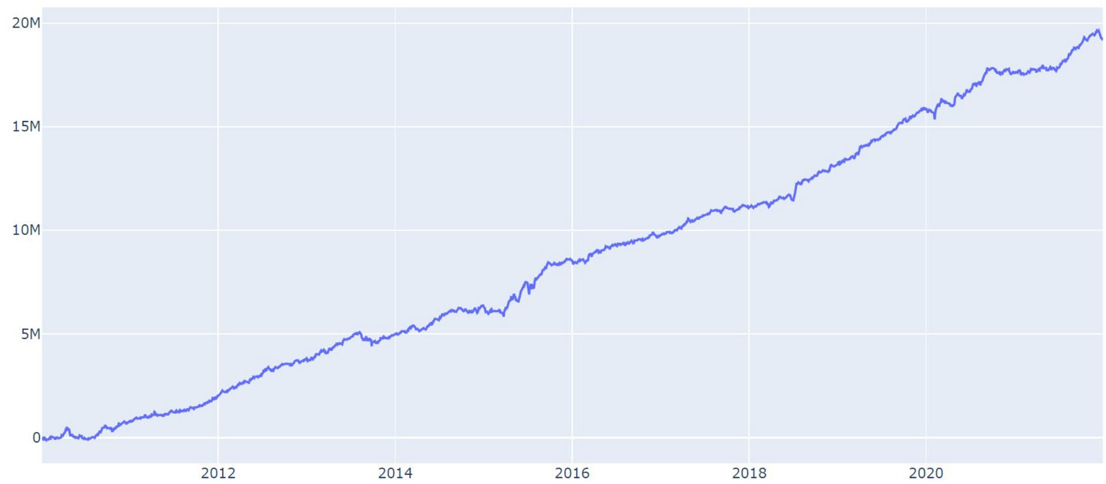
2.2.1 因子思路

2.2.1.1 计算每只股票过去 21 天的上影线和下影线的 corr，做空 corr 大的，做多 corr 小的。

2.2.1.2 因为上影线代表空头力量，下影线代表多头力量。若上影线减小下影线增大，则是空头力量下降，多头力量上升，应当做多。

2.2.2 因子表现

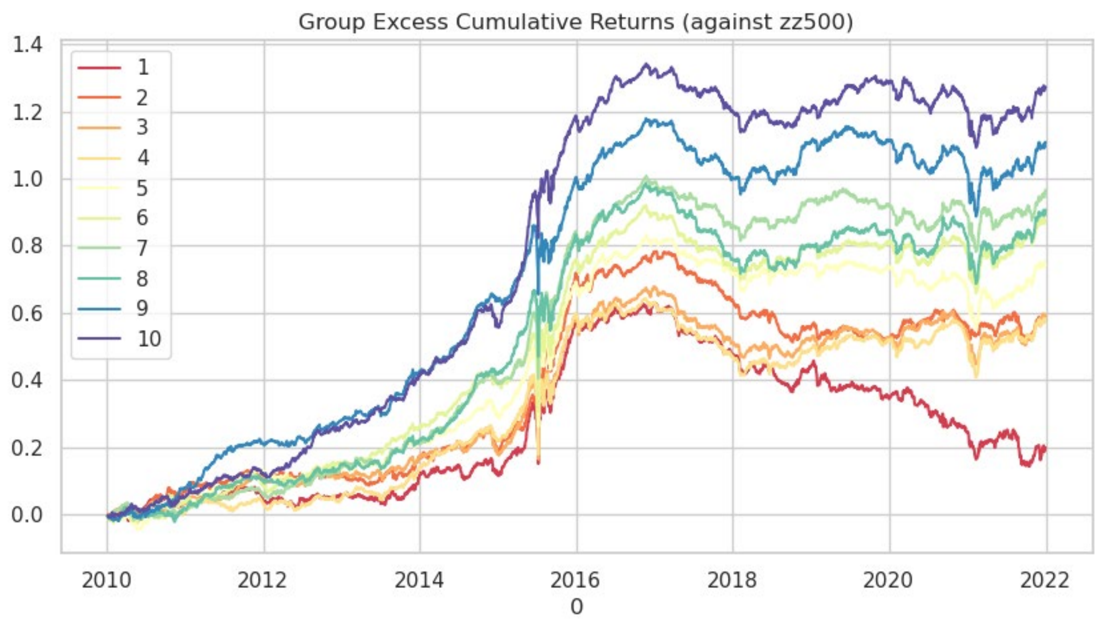
2.2.2.1 PnL



2.2.2.2 SimSummary

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	fitness	ddStart	ddEnd
20100104-20101231	10.00	-10.00	0.789	7.97	35.99	1.29(0.08)	5.65	0.51	0.61	20100419	20100712
20110104-20111230	10.00	-10.00	1.226	12.16	34.44	2.63(0.17)	2.06	0.59	1.56	20110414	20110517
20120104-20121231	10.00	-10.00	1.809	18.01	32.22	3.96(0.25)	1.94	0.61	2.96	20120726	20120815
20130104-20131231	10.00	-10.00	1.182	12.02	34.16	1.74(0.11)	6.73	0.59	1.03	20130730	20130926
20140102-20141231	10.00	-10.00	1.322	13.06	33.64	2.32(0.15)	2.99	0.56	1.45	20140312	20140410
20150105-20151231	10.00	-10.00	2.192	21.74	32.63	2.40(0.15)	6.32	0.57	1.96	20150624	20150708
20160104-20161230	10.00	-10.00	1.239	12.28	32.27	2.34(0.15)	3.00	0.58	1.44	20161130	20161219
20170103-20171229	10.00	-10.00	1.315	13.04	30.40	2.76(0.18)	2.96	0.60	1.81	20170929	20171031
20180102-20181228	10.00	-10.00	2.089	20.80	31.00	3.73(0.24)	2.89	0.62	3.05	20180614	20180628
20190102-20191231	10.00	-10.00	2.713	26.91	32.02	5.04(0.32)	1.82	0.61	4.62	20191009	20191014
20200102-20201231	10.00	-10.00	1.715	17.08	32.82	1.97(0.13)	5.38	0.55	1.42	20191225	20200206
20210104-20211231	10.00	-10.00	1.573	15.67	31.89	2.25(0.14)	4.91	0.58	1.58	20211214	20211231
20100104-20211231	10.00	-10.00	19.165	15.91	32.79	2.53(0.16)	6.73	0.58	1.76	20130730	20130926

2.2.2.3 十分组图



2.2.2.4 和风格因子的相关性

```
/home/cuiyf/myalphasim/Basic/pnl:
    alpha.20dr                  : 0.183471
    alpha.5dr                   : 0.117427
    alpha.CorrCloseAmount       : 0.078111
    alpha.MeanAmount            : 0.040062
/home/cuiyf/myalphasim/Barra/pnl:
    alpha.BarraBeta             : 0.109635
    alpha.BarraLiquidity        : 0.069319
    alpha.BarraSize             : 0.016961
    alpha.BarraNonLinearSize    : 0.015285
    alpha.BarraMomentum         : -0.002076
    alpha.BarraResidualVolatility: -0.050983
```

2.2.2.5 和因子库的相关性

```
/usr/local/bin/bcorr:5: DeprecationWarni
  from scipy.stats.stats import pearsonr
+0.236845  /data/share/poolpnl/e628e220
+0.242456  /data/share/poolpnl/038f3d5c
+0.242940  /data/share/poolpnl/8606204a
+0.246656  /data/share/poolpnl/03391994
+0.252183  /data/share/poolpnl/d1c7b340
+0.255344  /data/share/poolpnl/9c4e7a7d
+0.263056  /data/share/poolpnl/b16662a1
+0.273621  /data/share/poolpnl/8dc92cd5
+0.286891  /data/share/poolpnl/5d0b4c06
+0.307999  /data/share/poolpnl/1fcca290
```

2.2.3 因子讨论

2.2.3.1 因子以多头收益为主，线性度不错。

2.3 Alpha.ExcessUpDownCorr

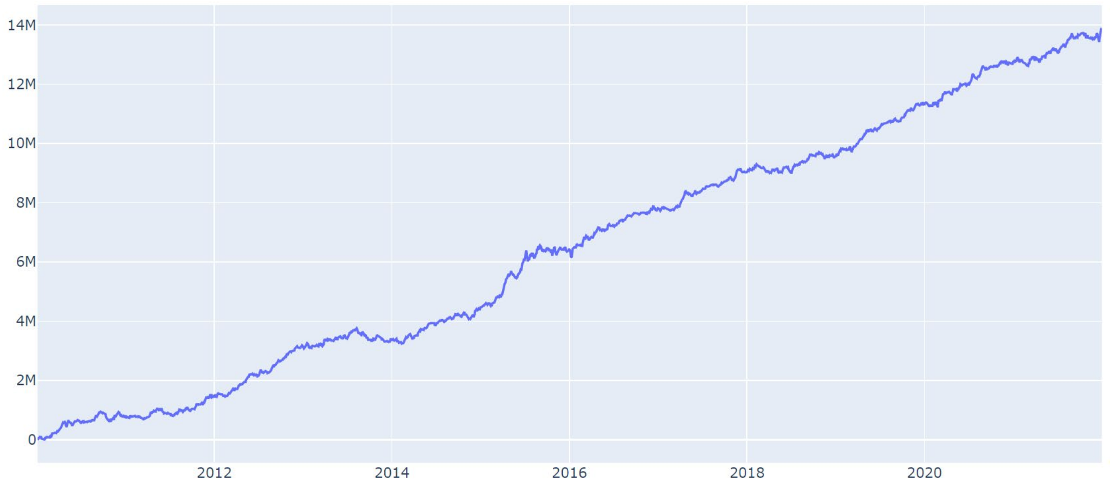
2.3.1 因子思路

2.3.1.1 思路和上一个因子一样，不过这次我计算的是超额上影线和超额下影线。

2.3.1.2 这个因子和上一个因子的相关性是 0.29.

2.3.2 因子表现

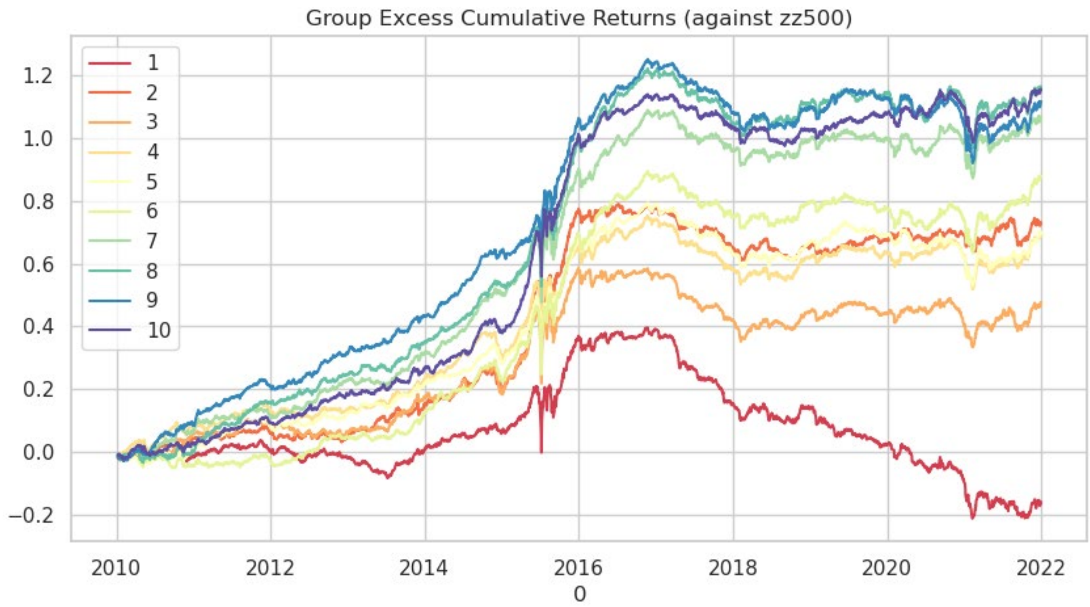
2.3.2.1 PnL



2.3.2.2 SimSummary

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	fitness	ddStart	ddEnd
20100104-20101231	10.00	-10.00	0.784	7.97	36.71	1.81(0.12)	3.44	0.53	0.84	20100921	20101026
20110104-20111230	10.00	-10.00	0.695	6.89	36.55	1.73(0.11)	2.83	0.53	0.75	20110513	20110714
20120104-20121231	10.00	-10.00	1.672	16.65	35.19	4.79(0.31)	1.17	0.64	3.30	20120711	20120719
20130104-20131231	10.00	-10.00	0.224	2.28	34.31	0.52(0.03)	4.70	0.50	0.13	20130812	20131216
20140102-20141231	10.00	-10.00	1.091	10.77	33.85	2.65(0.17)	5.16	0.59	1.50	20130812	20140210
20150105-20151231	10.00	-10.00	1.960	19.44	34.72	2.85(0.18)	3.73	0.58	2.14	20150709	20150714
20160104-20161230	10.00	-10.00	1.390	13.79	35.21	2.78(0.18)	4.10	0.56	1.74	20150907	20160108
20170103-20171229	10.00	-10.00	1.218	12.08	34.39	2.90(0.19)	2.10	0.59	1.72	20170425	20170516
20180102-20181228	10.00	-10.00	0.525	5.23	35.50	1.28(0.08)	3.06	0.56	0.49	20180212	20180515
20190102-20191231	10.00	-10.00	1.784	17.69	36.41	4.18(0.27)	1.85	0.62	2.91	20190301	20190307
20200102-20201231	10.00	-10.00	1.417	14.11	37.60	2.56(0.16)	1.82	0.56	1.57	20200218	20200225
20210104-20211231	10.00	-10.00	1.000	9.96	38.59	1.62(0.10)	3.06	0.55	0.82	20211012	20211220
20100104-20211231	10.00	-10.00	13.760	11.43	35.75	2.39(0.15)	5.16	0.57	1.35	20130812	20140210

2.3.2.3 十分组图



2.3.2.4 和风格因子的相关性

```
/home/cuiyf/myalphasim/Basic/pnl:
    alpha.CorrCloseAmount         : 0.301229
    alpha.20dr                    : 0.119187
    alpha.MeanAmount              : 0.104639
    alpha.5dr                     : 0.024828
/home/cuiyf/myalphasim/Barra/pnl:
    alpha.BarraMomentum           : -0.017182
    alpha.BarraNonLinearSize      : -0.102198
    alpha.BarraSize               : -0.107040
    alpha.BarraResidualVolatility: -0.216929
    alpha.BarraBeta               : -0.237130
    alpha.BarraLiquidity          : -0.239523
```

2.3.2.5 和因子库的相关性

```
/usr/local/bin/bcorr:5: DeprecationWarni
  from scipy.stats.stats import pearsonr
+0.264660   /data/share/poolpnl/197e1aeb
+0.264865   /data/share/poolpnl/a0c9ae89
+0.271934   /data/share/poolpnl/c1574531
+0.272154   /data/share/poolpnl/4756e3ce
+0.272299   /data/share/poolpnl/c175db07
+0.290714   /data/share/poolpnl/c7c93edd
+0.293809   /data/share/poolpnl/537aab46
+0.296008   /data/share/poolpnl/83817c66
+0.310138   /data/share/poolpnl/6a8c950c
+0.311005   /data/share/poolpnl/9338bf95
```

2.3.3 因子讨论

2.3.3.1 用超额指标哭做出和原本因子相关性很低的因子

2.3.3.2 该因子以多头收益为主，线性度也不错。