

国泰君安191因子回测-181-191

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1 Alpha181

$$\begin{aligned} Alpha = & SUM(((CLOSE/DELAY(CLOSE,1) - 1) - MEAN((CLOSE/DELAY(CLOSE,1) - 1),20)) - \\ & (BANCHMARKINDEXCLOSE - MEAN(BANCHMARKINDEXCLOSE,20))^2,20)/ \\ & SUM((BANCHMARKINDEXCLOSE - MEAN(BANCHMARKINDEXCLOSE,20))^3) \end{aligned} \quad (1)$$

2 Alpha182

$$\begin{aligned} Alpha = & COUNT((CLOSE > OPEN \& BANCHMARKINDEXCLOSE > BANCHMARKINDEXOPEN) OR \\ & (CLOSE < OPEN \& BANCHMARKINDEXCLOSE < BANCHMARKINDEXOPEN),20)/20 \end{aligned} \quad (2)$$

3 Alpha183

$$\begin{aligned} Alpha = & MAX(SUMAC(CLOSE - MEAN(CLOSE,24))) - \\ & MIN(SUMAC(CLOSE - MEAN(CLOSE,24)))/STD(CLOSE,24) \end{aligned} \quad (3)$$

4 Alpha184

$$Alpha = (RANK(CORR(DELAY((OPEN - CLOSE),1),CLOSE,200)) + RANK((OPEN - CLOSE))) \quad (4)$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	10.0	-10.0	4.23	21.84	95.07	7.05(0.446)	1.76	0.7	9.19	3.38	795 X 782	30.2	14.01	13.47	0.0361
20110101-20111231	10.0	-10.0	3.47	17.78	96.01	8.06(0.51)	1.04	0.68	7.41	3.47	926 X 943	-18.08	-39.34	53.64	0.032
20120101-20121231	10.0	-10.0	1.94	9.99	96.7	4.96(0.313)	1.99	0.61	4.13	1.59	1102 X 1088	13.15	3.25	6.84	0.0192
20130101-20131231	10.0	-10.0	3.96	20.78	93.46	7.49(0.474)	1.37	0.68	8.9	3.53	1200 X 1197	43.28	19.03	-1.7	0.0323
20140101-20141231	9.99	-10.0	4.03	20.56	93.54	7.78(0.492)	2.58	0.72	8.79	3.65	1217 X 1234	54.94	35.54	-13.81	0.0341
20150101-20151231	9.99	-10.02	7.59	38.9	90.38	3.84(0.243)	15.04	0.64	17.21	2.52	1264 X 1270	109.59	46.78	-31.6	0.0397
20160101-20161231	10.0	-10.0	2.91	14.93	96.8	4.27(0.27)	4.27	0.71	6.17	1.68	1371 X 1377	1.41	-15.42	28.45	0.0287
20170101-20171231	10.0	-10.0	2.48	12.69	97.16	6.94(0.439)	1.96	0.69	5.22	2.51	1461 X 1459	-6.56	0.88	31.93	0.0247
20180101-20181231	9.99	-10.0	1.09	5.61	97.44	2.25(0.142)	3.07	0.55	2.3	0.54	1678 X 1648	-35.1	-38.75	46.3	0.01
20190101-20191231	10.0	-10.0	2.73	14.01	94.09	7.2(0.455)	2.2	0.69	5.96	2.78	1739 X 1786	34.09	26.71	-6.06	0.0211
20200101-20200331	10.0	-10.01	0.56	12.03	92.15	3.96(0.251)	1.46	0.52	5.22	1.43	1834 X 1750	2.63	-12.47	21.41	0.0135
20100104-20200331	10.0	-10.0	35.0	17.58	95.0	4.36(0.275)	15.03	0.66	7.4	1.87	1289 X 1290	22.2	4.85	12.95	0.0275

Figure 1: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.9735	3.76	4.38	4.8	1.78	185	211919_my_176
0.8711	4.46	4.9	4.98	2.84	156	213024_agen.ZSAlpha_39
0.7973	4.69	4.03	-1.15	2.24	139	213796_v1v2_n_191004_142

Figure 2: 相关性结果

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	10.0	-10.0	-0.08	-0.43	13.77	-0.15(-0.01)	5.88	0.45	-1.25	-0.03	793 X 783	12.06	14.01	-12.92	-0.0023
20110101-20111231	10.0	-10.0	1.09	5.61	12.09	3.24(0.205)	1.56	0.55	18.55	2.21	935 X 934	-26.61	-39.34	37.82	0.0087
20120101-20121231	10.0	-10.0	-0.78	-4.03	12.14	-2.06(-0.13)	12.86	0.45	-13.29	-1.19	1096 X 1094	0.8	3.25	-8.87	-0.0088
20130101-20131231	10.0	-10.0	0.05	0.25	13.38	0.12(0.007)	2.53	0.45	0.76	0.02	1201 X 1195	25.12	19.03	-24.61	-0.0017
20140101-20141231	10.0	-10.0	0.37	1.9	14.49	0.93(0.059)	3.98	0.53	5.24	0.34	1225 X 1227	40.97	35.54	-37.15	0.0026
20150101-20151231	9.99	-10.0	1.42	7.28	12.42	1.29(0.082)	12.17	0.5	23.41	0.99	1261 X 1272	77.76	46.78	-63.15	0.0029
20160101-20161231	10.0	-10.0	-0.08	-0.4	13.94	-0.32(-0.02)	3.47	0.5	-1.15	-0.05	1371 X 1377	-9.05	-15.42	8.25	-0.0005
20170101-20171231	10.0	-10.0	0.34	1.75	11.94	1.11(0.07)	3.28	0.52	5.86	0.43	1463 X 1456	-16.0	0.88	19.49	0.0018
20180101-20181231	10.0	-10.0	-0.64	-3.31	12.58	-1.8(-0.114)	8.09	0.46	-10.52	-0.93	1670 X 1657	-42.58	-38.75	35.96	-0.0057
20190101-20191231	10.0	-10.0	1.84	9.44	10.97	5.67(0.358)	1.27	0.62	34.4	5.25	1764 X 1761	32.31	26.71	-13.44	0.0144
20200101-20200331	10.0	-10.0	0.38	8.09	14.15	2.9(0.184)	2.89	0.52	22.89	2.19	1812 X 1771	-1.68	-12.47	17.88	0.0072
20100104-20200331	10.0	-10.0	3.9	1.96	12.8	0.76(0.048)	16.8	0.5	6.13	0.3	1291 X 1288	9.21	4.85	-5.29	0.0013

Figure 3: 回测结果

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	10.0	-10.0	5.83	30.1	129.25	8.84(0.559)	2.35	0.77	9.32	4.27	910 X 906	39.73	14.01	20.48	0.053
20110101-20111231	10.0	-10.0	3.58	18.36	126.97	6.92(0.437)	2.46	0.69	5.78	2.63	1074 X 1072	-19.81	-39.34	56.52	0.0373
20120101-20121231	10.0	-10.0	3.23	16.62	128.47	7.76(0.491)	1.1	0.71	5.18	2.79	1186 X 1188	17.86	3.25	15.38	0.0338
20130101-20131231	10.0	-10.0	5.38	28.26	129.56	9.21(0.583)	1.63	0.71	8.72	4.3	1224 X 1223	51.11	19.03	5.39	0.048
20140101-20141231	9.99	-9.99	5.04	25.72	130.26	9.55(0.604)	2.09	0.76	7.9	4.25	1253 X 1258	58.18	35.54	-6.74	0.0448
20150101-20151231	9.96	-10.01	8.35	43.15	126.52	3.49(0.22)	22.22	0.67	13.54	2.04	1351 X 1353	118.92	46.78	-32.9	0.0509
20160101-20161231	9.97	-9.97	3.99	20.47	130.99	4.39(0.278)	4.43	0.7	6.26	1.74	1435 X 1430	2.83	-15.42	38.16	0.04
20170101-20171231	9.97	-9.97	2.81	14.46	130.08	5.53(0.35)	2.75	0.67	4.44	1.85	1626 X 1624	-6.47	0.88	35.34	0.0292
20180101-20181231	9.99	-9.99	2.13	10.99	130.32	3.55(0.225)	2.65	0.57	3.37	1.03	1755 X 1758	-33.24	-38.75	55.19	0.0195
20190101-20191231	9.99	-9.99	2.02	10.36	130.02	4.67(0.295)	2.25	0.64	3.19	1.32	1809 X 1808	28.56	26.71	-7.85	0.0169
20200101-20200331	9.98	-10.01	0.4	8.64	129.82	2.59(0.164)	1.52	0.53	2.67	0.67	1856 X 1833	-4.39	-12.47	21.71	0.012
20100104-20200331	9.99	-9.99	42.76	21.53	129.26	4.42(0.279)	22.17	0.69	6.65	1.8	1374 X 1373	25.02	4.85	17.98	0.0367

Figure 4: 回测结果

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	10.0	-10.0	5.63	29.11	133.2	7.7(0.487)	2.83	0.71	8.74	3.6	909 X 906	38.21	14.01	20.01	0.0513
20110101-20111231	10.0	-10.0	3.59	18.41	130.55	6.31(0.399)	3.88	0.67	5.64	2.37	1073 X 1073	-19.46	-39.34	56.27	0.0378
20120101-20121231	10.0	-10.0	2.85	14.68	131.85	5.8(0.367)	1.25	0.65	4.45	1.94	1185 X 1189	16.29	3.25	13.06	0.0302
20130101-20131231	10.0	-10.0	5.28	27.72	133.55	8.57(0.542)	1.63	0.74	8.3	3.9	1223 X 1224	51.13	19.03	4.3	0.0475
20140101-20141231	9.99	-9.99	5.05	25.81	134.11	8.42(0.532)	2.53	0.73	7.7	3.69	1253 X 1258	61.45	35.54	-9.84	0.0451
20150101-20151231	9.96	-10.01	7.73	39.96	130.46	3.08(0.195)	23.12	0.65	12.15	1.71	1353 X 1351	118.71	46.78	-39.03	0.0473
20160101-20161231	9.97	-9.97	3.73	19.17	133.11	3.79(0.24)	6.85	0.66	5.76	1.44	1432 X 1433	4.02	-15.42	34.35	0.0382
20170101-20171231	9.97	-9.97	2.69	13.84	133.01	4.59(0.291)	2.96	0.67	4.15	1.48	1621 X 1628	-8.13	0.88	35.75	0.0283
20180101-20181231	9.99	-9.99	2.07	10.64	133.16	3.0(0.19)	3.04	0.56	3.2	0.85	1751 X 1762	-32.07	-38.75	53.34	0.0197
20190101-20191231	9.99	-9.99	1.55	7.96	133.6	2.85(0.18)	3.32	0.58	2.38	0.7	1806 X 1811	24.29	26.71	-8.39	0.0137
20200101-20200331	9.97	-10.01	0.3	6.38	131.43	1.71(0.108)	1.7	0.52	1.94	0.38	1849 X 1840	-7.31	-12.47	19.99	0.0099
20100104-20200331	9.99	-9.99	40.47	20.38	132.63	3.9(0.246)	23.06	0.66	6.14	1.53	1372 X 1375	24.64	4.85	16.06	0.0353

Figure 5: 回测结果

5 Alpha185

$$Alpha = RANK((-1 * ((1 - (OPEN/CLOSE))^2))) \quad (5)$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	10.0	-10.0	0.3	1.56	128.77	0.55(0.035)	6.66	0.51	0.49	0.06	903 X 913	11.2	14.01	-8.07	0.0001
20110101-20111231	10.0	-10.0	-0.07	-0.36	125.59	-0.15(-0.01)	6.28	0.51	-0.11	-0.01	1069 X 1077	-37.16	-39.34	36.44	-0.0026
20120101-20121231	9.99	-10.0	-0.26	-1.36	124.55	-0.62(-0.039)	4.51	0.53	-0.44	-0.07	1180 X 1194	1.81	3.25	-4.53	-0.0042
20130101-20131231	10.0	-10.0	0.39	2.03	121.73	0.65(0.041)	4.18	0.52	0.67	0.08	1213 X 1233	26.78	19.03	-22.7	-0.0005
20140101-20141231	9.98	-9.99	0.69	3.56	111.99	1.06(0.067)	5.29	0.5	1.27	0.19	1242 X 1270	42.99	35.54	-35.84	0.0007
20150101-20151231	9.93	-9.99	1.09	10.12	97.52	0.64(0.04)	20.38	0.46	3.99	0.2	1346 X 1359	85.59	46.78	-65.62	-0.0053
20160101-20161231	9.9	-9.99	1.08	5.62	106.35	0.87(0.055)	11.33	0.52	2.1	0.2	1418 X 1447	-4.38	-15.42	15.45	0.0008
20170101-20171231	9.88	-9.98	0.63	3.24	109.81	0.93(0.059)	5.36	0.51	1.18	0.16	1607 X 1643	-16.86	0.88	23.18	-0.0005
20180101-20181231	9.96	-9.99	-0.76	-3.89	115.42	-1.0(-0.063)	15.31	0.5	-1.35	-0.18	1740 X 1773	-46.56	-38.75	38.65	-0.011
20190101-20191231	9.94	-10.0	1.9	9.76	123.68	3.59(0.227)	3.02	0.61	3.16	1.01	1792 X 1825	26.31	26.71	-6.69	0.0129
20200101-20200331	9.95	-9.99	0.01	0.2	123.02	0.06(0.004)	4.28	0.48	0.07	0.0	1846 X 1843	-12.76	-12.47	13.13	0.0005
20100104-20200331	9.96	-9.99	5.81	2.97	116.68	0.49(0.031)	20.32	0.52	1.0	0.08	1363 X 1385	8.45	4.85	-2.58	-0.0009

Figure 6: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.7597	3.23	8.31	8.47	3.76	120	214423_pv model 5_2_191101_421
0.718	3.0	6.19	8.05	2.81	139	213812_gpd1_v1v2_71
0.6501	2.98	4.51	1.88	2.84	185	211919_my_210

Figure 7: 相关性结果

6 Alpha186

$$\begin{aligned}
 Alpha = & (MEAN(ABS(SUM((LD > 0 \& LD > HD)?LD : 0, 14) * 100 / SUM(TR, 14) - SUM((HD > 0 \& \\
 & HD > LD)?HD : 0, 14) * 100 / SUM(TR, 14)) / (SUM((LD > 0 \& LD > HD)?LD : 0, 14) * \\
 & 100 / SUM(TR, 14) + SUM((HD > 0 \& HD > LD)?HD : 0, 14) * 100 / SUM(TR, 14)) * 100, 6) + \\
 & DELAY(MEAN(ABS(SUM((LD > 0 \& LD > HD)?LD : 0, 14) * 100 / SUM(TR, 14) - \\
 & SUM((HD > 0 \& HD > LD)?HD : 0, 14) * 100 / SUM(TR, 14)) / (SUM((LD > 0 \& \\
 & LD > HD)?LD : 0, 14) * 100 / SUM(TR, 14) + SUM((HD > 0 \& HD > LD)?HD : 0, 14) * \\
 & 100 / SUM(TR, 14)) * 100, 6), 6)) / 2
 \end{aligned} \quad (6)$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	10.0	-10.0	0.57	2.92	18.01	0.83(0.053)	8.93	0.5	6.49	0.34	799 X 956	19.77	14.01	-13.93	0.0053
20110101-20111231	10.0	-10.0	0.75	3.86	17.3	1.8(0.114)	3.64	0.52	8.91	0.85	955 X 1125	-29.54	-39.34	37.25	0.0069
20120101-20121231	10.0	-10.0	0.05	0.28	17.73	0.14(0.009)	6.22	0.47	0.62	0.02	1048 X 1272	4.72	3.25	-4.17	0.0012
20130101-20131231	10.0	-10.0	-1.5	-7.9	17.68	-2.65(-0.167)	15.84	0.48	-17.88	-1.77	1082 X 1296	16.17	19.03	-31.96	-0.011
20140101-20141231	10.0	-10.0	0.38	1.94	17.58	0.72(0.045)	6.25	0.48	4.41	0.24	1055 X 1287	40.23	35.54	-36.34	-0.0
20150101-20151231	9.98	-10.01	-0.2	-1.01	17.21	-0.18(-0.012)	18.79	0.49	-2.41	-0.04	1096 X 1308	71.79	46.78	-73.67	-0.0035
20160101-20161231	10.0	-10.0	0.18	0.92	16.26	0.39(0.024)	7.91	0.5	2.25	0.09	1277 X 1425	-6.44	-15.42	8.27	0.0008
20170101-20171231	10.0	-10.0	0.07	0.37	15.78	0.19(0.012)	4.95	0.49	0.94	0.03	1433 X 1651	-17.06	0.88	17.8	0.0009
20180101-20181231	10.0	-10.0	1.02	5.23	16.54	2.45(0.155)	6.01	0.57	12.64	1.38	1569 X 1830	-35.2	-38.75	45.63	0.0077
20190101-20191231	10.0	-10.0	-1.02	-5.22	17.48	-2.72(-0.172)	14.83	0.41	-11.95	-1.49	1642 X 1962	17.38	26.71	-27.8	-0.0066
20200101-20200331	9.99	-10.0	-0.03	-0.68	17.7	-0.17(-0.011)	6.82	0.48	-1.48	-0.03	1712 X 1965	-16.54	-12.47	15.21	-0.0019
20100104-20200331	10.0	-10.0	0.26	0.13	17.17	0.05(0.003)	32.88	0.49	0.31	0.0	1208 X 1425	7.6	4.85	-7.33	0.0001

Figure 8: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.5213	2.16	3.43	1.18	1.3	113	214728_fac203
0.4096	4.53	2.65	-0.13	2.05	113	214729_fac15
0.354	5.55	2.33	-2.17	2.93	156	213024_agen.ZSAlpha_38

Figure 9: 相关性结果

7 Alpha187

$$Alpha = SUM((OPEN \leq DELAY(OPEN, 1) ? 0 : MAX((HIGH - OPEN), (OPEN - DELAY(OPEN, 1)))), 20) \quad (7)$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	10.0	-10.0	-2.37	-12.22	5.92	-1.81(-0.115)	24.9	0.36	-82.56	-2.6	536 X 1252	0.07	14.01	-24.52	-0.0038
20110101-20111231	10.0	-10.0	-0.56	-2.89	6.04	-0.51(-0.032)	15.17	0.45	-19.11	-0.35	676 X 1447	-40.33	-39.34	34.56	-0.0005
20120101-20121231	10.0	-10.0	-0.39	-1.98	5.51	-0.39(-0.024)	16.81	0.42	-14.39	-0.23	665 X 1695	2.29	3.25	-6.25	-0.0011
20130101-20131231	10.0	-10.0	-1.59	-8.35	5.82	-1.38(-0.087)	19.67	0.44	-57.48	-1.65	641 X 1804	12.73	19.03	-29.44	-0.0024
20140101-20141231	9.96	-10.0	-2.28	-11.62	6.76	-1.77(-0.112)	26.38	0.4	-69.0	-2.32	836 X 1668	19.18	35.54	-42.36	-0.0028
20150101-20151231	9.99	-10.0	-0.58	-2.89	5.96	-0.26(-0.016)	43.23	0.48	-19.89	-0.18	877 X 1819	75.32	46.78	-81.17	0.0002
20160101-20161231	10.0	-10.0	-2.54	-13.03	6.05	-2.07(-0.131)	36.48	0.34	-86.13	-3.04	885 X 1974	-39.53	-15.42	13.47	-0.0026
20170101-20171231	10.0	-10.0	-0.19	-1.04	7.05	-0.19(-0.012)	9.75	0.42	-5.65	-0.07	855 X 2374	-21.88	0.88	19.88	-0.0004
20180101-20181231	10.0	-10.0	-1.85	-9.45	6.75	-1.83(-0.116)	26.36	0.44	-56.3	-2.17	876 X 2631	-55.5	-38.75	36.51	-0.0018
20190101-20191231	10.0	-10.0	-1.5	-7.69	6.64	-1.21(-0.077)	24.0	0.41	-46.24	-1.3	899 X 2710	14.3	26.71	-29.65	-0.0017
20200101-20200331	9.99	-10.0	-0.57	-12.28	6.57	-2.19(-0.138)	7.94	0.33	-75.26	-2.99	924 X 2758	-32.81	-12.47	8.08	-0.004
20100104-20200331	9.99	-10.0	-14.42	-7.23	6.26	-1.09(-0.069)	147.44	0.41	-46.3	-1.17	779 X 1957	-4.05	4.85	-10.43	-0.0018

Figure 10: 回测结果

-0.3929	2.39	4.49	4.44	1.8	156	213024_agen.ZSAlpha_26
-0.4091	3.71	5.91	3.34	2.41	156	213024_agen.ZSAlpha_14
-0.4161	2.34	3.86	3.77	1.64	156	213024_agen.ZSAlpha_25

Figure 11: 相关性结果

8 Alpha188

$$Alpha = ((HIGH - LOWSMA(HIGH - LOW, 11, 2)) / SMA(HIGH - LOW, 11, 2)) * 100 \quad (8)$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	10.0	-9.99	-1.03	-5.33	132.26	-1.75(-0.111)	11.22	0.43	-1.61	-0.35	827 X 987	-2.94	14.01	-7.72	-0.0072
20110101-20111231	10.0	-10.0	-0.89	-4.55	131.69	-1.99(-0.126)	11.51	0.41	-1.38	-0.37	969 X 1177	-46.22	-39.34	37.12	-0.0062
20120101-20121231	10.0	-9.99	-0.24	-1.25	131.14	-0.57(-0.036)	9.01	0.45	-0.38	-0.06	1046 X 1327	-3.74	3.25	1.25	-0.0017
20130101-20131231	10.0	-9.99	-1.11	-5.83	122.53	-1.83(-0.116)	12.04	0.45	-1.9	-0.4	1094 X 1352	14.27	19.03	-25.95	-0.0059
20140101-20141231	9.99	-9.98	-1.16	-5.96	109.42	-1.5(-0.095)	13.33	0.48	-2.17	-0.35	1181 X 1331	31.88	35.54	-43.82	-0.0028
20150101-20151231	10.01	-9.91	-3.44	-17.7	85.29	-0.85(-0.054)	68.22	0.55	-8.3	-0.39	1438 X 1266	53.41	46.78	-89.5	0.0061
20160101-20161231	9.98	-9.87	-2.08	-10.84	103.91	-1.31(-0.083)	20.92	0.46	-4.13	-0.42	1389 X 1475	-27.28	-15.42	6.0	-0.0055
20170101-20171231	9.98	-9.86	-1.08	-5.56	112.99	-1.58(-0.1)	11.35	0.47	-1.97	-0.35	1486 X 1763	-31.45	0.88	20.62	-0.0045
20180101-20181231	9.98	-9.94	-0.37	-1.92	119.31	-0.48(-0.03)	6.7	0.49	-0.64	-0.06	1569 X 1944	-55.42	-38.75	51.81	0.0006
20190101-20191231	9.99	-9.91	-3.06	-15.75	130.52	-5.75(-0.364)	31.26	0.32	-4.82	-2.0	1509 X 2108	-10.48	26.71	-21.05	-0.0204
20200101-20200331	9.99	-9.88	-0.18	-3.8	126.53	-0.91(-0.058)	5.25	0.47	-1.23	-0.16	1550 X 2139	-23.71	-12.47	16.15	-0.0073
20100104-20200331	9.99	-9.94	-14.64	-7.39	118.09	-0.98(-0.062)	147.52	0.45	-2.5	-0.24	1259 X 1489	-8.17	4.85	-6.57	-0.0048

Figure 12: 回测结果

-0.6598	2.29	10.51	6.93	1.19	138	213876_gpd1_v1v2_191006_32
-0.671	3.36	5.56	4.99	1.59	135	213984_v1v2_1n_191006_34
-0.7276	3.23	8.31	8.47	3.76	120	214423_pv_model_5_2_191101_42

Figure 13: 相关性结果

9 Alpha189

$$Alpha = MEAN(ABS(CLOSE - MEAN(CLOSE, 6)), 6) \quad (9)$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	10.0	-10.0	-2.82	-14.57	12.81	-2.21(-0.14)	29.86	0.37	-45.5	-2.35	528 X 1274	-4.18	14.01	-24.95	-0.0041
20110101-20111231	10.0	-10.0	-0.6	-3.08	11.88	-0.59(-0.037)	13.55	0.46	-10.36	-0.3	635 X 1499	-42.11	-39.34	35.95	-0.0007
20120101-20121231	10.0	-10.0	-0.0	-0.04	12.09	-0.01(-0.001)	15.53	0.47	-0.04	-0.0	653 X 1713	6.22	3.25	-6.24	-0.0009
20130101-20131231	9.99	-10.0	-1.47	-7.69	13.54	-1.33(-0.084)	16.13	0.44	-22.8	-1.0	624 X 1822	12.29	19.03	-27.69	-0.002
20140101-20141231	9.87	-10.01	-2.97	-15.11	14.74	-2.33(-0.147)	34.26	0.4	-41.33	-2.36	805 X 1703	9.84	35.54	-39.96	-0.0033
20150101-20151231	9.96	-10.01	-0.62	-3.33	13.31	-0.25(-0.016)	47.46	0.48	-9.64	-0.12	865 X 1837	72.37	46.78	-78.39	0.0002
20160101-20161231	9.96	-10.0	-2.65	-13.61	13.91	-1.92(-0.121)	42.99	0.35	-39.07	-1.9	855 X 2009	-41.94	-15.42	14.64	-0.0031
20170101-20171231	9.98	-10.0	-1.71	-8.82	14.64	-1.4(-0.089)	24.6	0.39	-24.01	-1.09	860 X 2384	-36.23	0.88	18.6	-0.0024
20180101-20181231	9.96	-10.01	-2.33	-12.04	14.65	-2.07(-0.131)	31.59	0.44	-32.83	-1.87	855 X 2656	-59.55	-38.75	35.27	-0.0021
20190101-20191231	9.98	-10.0	-2.18	-11.16	14.67	-1.55(-0.098)	34.14	0.39	-30.46	-1.35	884 X 2731	8.62	26.71	-30.92	-0.0028
20200101-20200331	9.96	-10.0	-0.7	-14.99	14.9	-2.3(-0.145)	10.48	0.4	-40.77	-2.3	895 X 2792	-37.23	-12.47	6.75	-0.0046
20100104-20200331	9.97	-10.0	-18.06	-9.09	13.65	-1.25(-0.079)	185.88	0.42	-26.61	-1.02	760 X 1983	-8.21	4.85	-9.96	-0.0022

Figure 14: 回测结果

-0.3725	3.71	5.91	3.34	2.41	156	213024_agen.ZSAlpha_14
-0.3768	3.43	4.55	3.8	2.38	185	211919_my_199
-0.4265	2.34	3.86	3.77	1.64	156	213024_agen.ZSAlpha_25

Figure 15: 相关性结果

10 Alpha190

$$\begin{aligned}
 Alpha = & LOG((COUNT(CLOSE/DELAY(CLOSE) - 1 > ((CLOSE/DELAY(CLOSE, 19))^{1/20} - 1), 20) - 1) * \\
 & (SUMIF(((CLOSE/DELAY(CLOSE) - 1 - (CLOSE/DELAY(CLOSE, 19))^{1/20} - 1))^2, \\
 & 20, CLOSE/DELAY(CLOSE) - 1 < (CLOSE/DELAY(CLOSE, 19))^{1/20} - 1)) / \\
 & ((COUNT((CLOSE/DELAY(CLOSE) - 1 < (CLOSE/DELAY(CLOSE, 19))^{1/20} - 1), 20)) * \\
 & (SUMIF((CLOSE/DELAY(CLOSE) - 1 - ((CLOSE/DELAY(CLOSE, 19))^{1/20} - 1))^2, 20, \\
 & CLOSE/DELAY(CLOSE) - 1 > (CLOSE/DELAY(CLOSE, 19))^{1/20} - 1)))
 \end{aligned} \quad (10)$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	10.0	-9.99	1.4	7.21	34.22	2.45(0.155)	3.85	0.54	8.43	1.13	677 X 1067	18.8	14.01	-4.37	0.0103
20110101-20111231	10.0	-10.0	0.62	3.17	32.41	1.21(0.077)	5.96	0.57	3.92	0.38	766 X 1305	-34.07	-39.34	40.41	0.0059
20120101-20121231	10.0	-10.0	1.26	6.49	32.45	2.57(0.162)	4.65	0.58	8.0	1.15	859 X 1459	11.69	3.25	1.29	0.0116
20130101-20131231	10.0	-9.99	1.83	9.59	33.59	3.99(0.252)	3.12	0.61	11.43	2.13	881 X 1513	36.06	19.03	-16.89	0.0119
20140101-20141231	10.0	-9.99	2.03	10.38	33.7	5.04(0.319)	2.66	0.64	12.32	2.8	852 X 1519	47.35	35.54	-26.62	0.0129
20150101-20151231	10.04	-9.97	0.7	3.63	37.35	0.37(0.023)	16.7	0.56	3.86	0.12	854 X 1572	71.55	46.78	-64.81	0.0026
20160101-20161231	10.0	-10.0	1.06	5.38	35.49	1.72(0.109)	6.89	0.62	6.1	0.67	969 X 1695	-6.1	-15.42	16.93	0.0098
20170101-20171231	9.99	-10.0	0.42	2.13	33.39	0.81(0.051)	5.44	0.56	2.56	0.2	1023 X 2002	-16.79	0.88	21.05	0.0049
20180101-20181231	9.9	-10.0	0.44	2.33	35.31	0.76(0.048)	8.44	0.54	2.6	0.2	1140 X 2230	-41.99	-38.75	46.15	0.0056
20190101-20191231	9.98	-9.99	0.19	1.03	34.41	0.29(0.018)	19.46	0.57	1.12	0.05	1308 X 2287	16.37	26.71	-14.41	0.0066
20200101-20200331	10.0	-9.99	-0.06	-1.27	32.59	-0.42(-0.026)	5.52	0.5	-1.55	-0.08	1414 X 2253	-17.95	-12.47	15.44	0.0006
20100104-20200331	9.99	-9.99	9.89	4.98	34.2	1.22(0.077)	22.15	0.58	5.81	0.47	944 X 1679	9.67	4.85	0.27	0.008

Figure 16: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.5	3.99	6.99	2.02	2.24	113	214729_fac86
0.4941	2.81	7.71	2.31	1.81	111	214809_pv_model_2_gen6_191114_114
0.4403	2.2	8.6	1.98	1.09	111	214801_pv_model_1_gen4_191114_56

Figure 17: 相关性结果

11 Alpha191

$$\text{Alpha} = ((\text{CORR}(\text{MEAN}(\text{VOLUME}, 20), \text{LOW}, 5) + ((\text{HIGH} + \text{LOW})/2)) - \text{CLOSE}) \quad (11)$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	10.0	-10.0	3.42	17.65	131.66	2.86(0.181)	6.31	0.6	5.36	1.05	634 X 583	23.8	14.01	11.49	0.007
20110101-20111231	10.0	-10.0	2.3	11.79	127.13	2.26(0.143)	3.9	0.55	3.71	0.69	759 X 704	-20.68	-39.34	44.26	0.0046
20120101-20121231	10.0	-10.0	0.99	5.1	124.53	1.04(0.066)	6.88	0.52	1.64	0.21	968 X 880	10.12	3.25	0.06	0.0018
20130101-20131231	10.0	-10.0	3.06	16.09	128.35	2.95(0.186)	6.25	0.56	5.01	1.04	1173 X 1054	33.33	19.03	-1.15	0.0054
20140101-20141231	10.0	-10.0	4.34	22.13	129.0	3.87(0.245)	4.78	0.62	6.86	1.6	1122 X 1008	57.1	35.54	-12.83	0.0074
20150101-20151231	9.99	-10.02	1.91	9.95	132.18	0.92(0.058)	12.47	0.57	2.95	0.25	1038 X 941	70.84	46.78	-51.18	0.0053
20160101-20161231	10.0	-10.0	1.14	5.85	136.76	0.99(0.063)	9.39	0.54	1.71	0.21	1238 X 1177	-24.42	-15.42	36.14	0.0024
20170101-20171231	10.0	-10.0	1.32	6.77	131.33	1.76(0.111)	4.81	0.58	2.06	0.4	1460 X 1392	-13.67	0.88	27.2	0.0031
20180101-20181231	10.0	-9.98	3.31	16.99	131.1	3.39(0.215)	5.0	0.58	5.21	1.22	1644 X 1582	-23.21	-38.75	57.4	0.0049
20190101-20191231	10.0	-9.97	2.39	12.42	127.36	1.93(0.122)	5.35	0.57	3.86	0.6	1840 X 1702	32.72	26.71	-8.21	0.0031
20200101-20200331	10.05	-9.86	-0.45	-10.3	133.62	-1.83(-0.116)	7.44	0.5	-2.89	-0.51	1904 X 1737	-36.45	-12.47	17.68	-0.0034
20100104-20200331	10.0	-9.99	23.74	11.94	130.03	1.92(0.122)	12.46	0.57	3.67	0.58	1205 X 1117	13.38	4.85	10.48	0.0043

Figure 18: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.8194	3.37	4.64	1.7	1.47	185	211919_my_83
0.4499	5.05	4.39	1.72	2.85	156	213024_agen.ZSAlpha_30
0.4262	3.63	2.06	0.96	1.49	185	211936_my_H804

Figure 19: 相关性结果

12 总结

alpha184的信号来源于第二个rank，即rank（OPEN-CLOSE），表明日内跌幅越大，则股票次日的表现会越好。