国泰君安191因子回测-31-40

郑骋, 香港中文大学（深圳）, 金融工程硕士
电话：15825675534, 邮箱：zhengzc@zju.edu.cn

April 14, 2020

1 Alpha31

$$Alpha = (CLOSE - MEAN(CLOSE, 12))/MEAN(CLOSE, 12) * 100$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	9.98	-10.0	-7.23	-37.41	53.03	-6.45(-0.408)	74.34	0.33	-28.21	-5.41	774 X 1026	-29.16	14.01	-45.62	-0.0583
20110101-20111231	9.99	-10.0	-4.09	-20.97	50.0	-4.33(-0.274)	47.48	0.37	-16.78	-2.81	955 X 1178	-61.2	-39.34	19.23	-0.0386
20120101-20121231	9.97	-10.0	-5.11	-26.36	50.91	-5.65(-0.358)	54.32	0.34	-20.7	-4.07	1062 X 1304	-28.86	3.25	-23.83	-0.0477
20130101-20131231	9.93	-10.01	-6.04	-31.81	51.68	-6.57(-0.416)	60.86	0.32	-24.64	-5.16	1028 X 1418	-11.99	19.03	-51.52	-0.0456
20140101-20141231	9.83	-10.01	-5.55	-28.53	51.25	-6.0(-0.38)	59.59	0.31	-22.26	-4.48	1057 X 1451	5.34	35.54	-61.77	-0.0406
20150101-20151231	9.64	-10.02	-9.68	-50.92	48.93	-3.49(-0.221)	100.85	0.39	-41.25	-3.56	1131 X 1571	15.84	46.78	-114.22	-0.0463
20160101-20161231	9.56	-10.0	-5.83	-30.37	49.95	-4.73(-0.299)	70.98	0.34	-24.48	-3.69	1186 X 1678	-55.71	-15.42	-6.53	-0.046
20170101-20171231	9.76	-9.99	-2.3	-11.88	49.4	-2.2(-0.139)	25.38	0.41	-9.65	-1.08	1451 X 1792	-46.26	0.88	21.64	-0.0233
20180101-20181228	9.93	-9.91	-5.97	-30.89	51.02	-6.06(-0.383)	60.73	0.36	-24.25	-4.71	1653 X 1857	-96.29	-38.75	34.52	-0.0448
20100104-20181228	9.84	-9.99	-51.8	-29.89	50.68	-4.28(-0.271)	528.4	0.35	-23.56	-3.29	1145 X 1475	-34.39	2.87	-25.39	-0.0434

Figure 1: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.6241	2.25	3.2	2.99	1.79	52	213716_QOQ_mrq_Operaincome
0.5159	11.95	11.15	4.54	6.85	157	212379_h8355
0.4635	4.02	2.3	1.17	2.24	106	214331_qh15

Figure 2: 相关性结果

2 Alpha32

$$Alpha = (-1 * SUM(RANK(CORR(RANK(HIGH), RANK(VOLUME), 3)), 3)) \quad (1)$$

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	2.27	11.72	66.54	6.56(0.415)	1.15	0.66	7.04	2.75	821 X 831	25.67	14.01	-2.24	0.0199
20110101-20111231	10.0	-10.0	2.16	11.05	66.2	6.92(0.438)	0.84	0.68	6.68	2.83	971 X 981	-22.15	-39.34	44.25	0.0196
20120101-20121231	10.0	-10.0	2.17	11.19	64.79	7.22(0.457)	1.44	0.66	6.91	3.0	1100 X 1114	17.03	3.25	5.34	0.0204
20130101-20131231	10.0	-10.0	2.31	12.13	63.6	8.62(0.545)	0.86	0.69	7.63	3.76	1149 X 1166	36.6	19.03	-12.33	0.0202
20140101-20141231	10.0	-9.99	1.89	9.67	64.02	6.32(0.399)	1.51	0.64	6.04	2.45	1125 X 1138	49.01	35.54	-29.69	0.0162
20150101-20151231	9.96	-9.97	3.46	17.76	66.11	6.12(0.387)	2.41	0.67	10.76	3.17	1118 X 1130	94.13	46.78	-58.46	0.0207
20160101-20161231	9.98	-9.97	2.16	11.07	64.53	7.18(0.454)	1.24	0.68	6.86	2.98	1280 X 1295	1.63	-15.42	20.52	0.0193
20170101-20171231	9.99	-9.96	2.57	13.18	64.5	8.04(0.509)	0.73	0.7	8.17	3.63	1494 X 1505	-4.43	0.88	30.83	0.0228
20180101-20181228	10.0	-9.99	1.51	7.76	63.06	4.6(0.291)	1.17	0.63	4.92	1.61	1655 X 1668	-27.89	-38.75	43.41	0.0116
20100104-20181228	9.99	-9.99	20.49	11.72	64.82	6.53(0.413)	2.4	0.67	7.23	2.78	1191 X 1203	18.8	2.87	4.65	0.019

Figure 3: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.7346	3.79	8.2	3.27	2.06	95	214857_pv_model_6_mod_gen6_191114_82
0.6877	2.6	7.59	4.54	1.38	95	214812_pv_model_2_mod_gen4_191114_148
0.6618	2.1	6.66	4.55	1.5	93	215042_pv_model_10_mod_gen4_191114_143

Figure 4: 相关性结果

3 Alpha33

$$Alpha = ((((-1 * TSMIN(LOW, 5)) + DELAY(TSMIN(LOW, 5), 5)) * RANK(((SUM(RET, 240) - SUM(RET, 20))/220))) * TSRANK(VOLUME, 5)) \quad (2)$$

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	0.17	0.86	71.57	0.13(0.008)	13.19	0.51	0.48	0.01	781 X 722	9.65	14.01	-7.93	0.0005
20110101-20111231	9.99	-10.0	-0.37	-1.91	68.38	-0.36(-0.023)	21.25	0.46	-1.11	-0.06	807 X 941	-43.9	-39.34	40.07	-0.0001
20120101-20121231	10.0	-10.0	2.07	10.68	68.31	1.97(0.124)	8.08	0.54	6.24	0.78	1036 X 1051	17.94	3.25	3.39	0.0046
20130101-20131231	10.0	-9.99	2.82	14.79	68.87	2.41(0.152)	9.96	0.58	8.59	1.12	1235 X 1049	30.75	19.03	-1.16	0.0045
20140101-20141231	9.99	-9.92	2.5	12.7	72.03	2.02(0.128)	5.67	0.58	7.12	0.85	1213 X 1035	37.76	35.54	-12.27	0.0029
20150101-20151231	9.85	-9.99	-1.03	-4.9	66.25	-0.36(-0.023)	31.62	0.56	-3.21	-0.1	1187 X 946	57.75	46.78	-67.5	0.0006
20160101-20161231	9.97	-9.99	0.86	4.41	71.0	0.59(0.037)	20.21	0.54	2.49	0.15	1275 X 1195	-28.34	-15.42	37.12	0.003
20170101-20171231	9.99	-10.0	-2.99	-15.31	70.27	-2.99(-0.189)	32.6	0.51	-8.71	-1.39	1368 X 1296	-41.6	0.88	10.95	-0.0042
20180101-20181228	9.89	-10.0	2.07	10.42	68.84	2.09(0.132)	5.48	0.57	6.21	0.81	1431 X 1677	-27.76	-38.75	48.69	0.0048
20100104-20181228	9.96	-9.99	6.1	3.5	69.51	0.48(0.03)	40.51	0.54	2.01	0.11	1148 X 1102	1.25	2.87	5.73	0.0018

Figure 5: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.3441	2.75	8.65	2.25	1.34	94	214986_pv_model_9_mod_gen4_191114_82
0.3164	8.57	6.95	2.16	3.76	130	213584_h7886
0.3063	3.51	9.16	4.61	1.51	170	211935_my_H452

Figure 6: 相关性结果

4 Alpha34

$$Alpha = MEAN(CLOSE, 12)/CLOSE \quad (3)$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	10.0	-9.98	7.2	37.23	52.96	6.55(0.414)	5.15	0.67	28.11	5.49	996 X 804	46.41	14.01	28.01	0.0597
20110101-20111231	9.99	-9.99	4.03	20.67	49.89	4.33(0.274)	6.42	0.63	16.58	2.79	1141 X 991	-19.04	-39.34	60.38	0.0392
20120101-20121231	10.0	-9.97	4.97	25.64	50.71	5.57(0.352)	5.28	0.66	20.21	3.96	1262 X 1104	23.95	3.25	27.3	0.0475
20130101-20131231	10.0	-9.94	5.95	31.29	51.61	6.73(0.425)	3.62	0.68	24.27	5.24	1370 X 1076	52.16	19.03	10.33	0.0462
20140101-20141231	10.01	-9.86	5.49	28.21	51.15	6.15(0.389)	5.12	0.69	22.05	4.57	1401 X 1107	61.91	35.54	-6.01	0.0421
20150101-20151231	10.01	-9.72	9.28	48.46	48.69	3.35(0.212)	30.86	0.61	39.6	3.35	1488 X 1214	114.86	46.78	-20.46	0.0459
20160101-20161231	10.0	-9.7	5.52	28.6	49.79	4.6(0.291)	8.75	0.66	23.08	3.48	1609 X 1255	6.42	-15.42	51.72	0.0449
20170101-20171231	9.98	-9.83	1.85	9.53	49.07	1.79(0.113)	6.34	0.58	7.79	0.79	1717 X 1526	-23.79	0.88	43.41	0.021
20180101-20181228	9.89	-9.95	4.98	25.81	50.5	5.14(0.325)	4.73	0.6	20.47	3.68	1768 X 1743	-37.63	-38.75	88.9	0.0381
20100104-20181228	9.99	-9.88	49.28	28.37	50.49	4.13(0.261)	30.93	0.64	22.46	3.1	1417 X 1203	25.09	2.87	31.64	0.0427

Figure 7: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.9835	3.41	6.33	4.46	2.66	170	211919_my_94
0.7464	9.41	4.96	2.3	5.47	170	211930_h_ori32
0.7358	8.51	8.73	4.56	8.04	105	214386_pv_model_3_2_191101_102

Figure 8: 相关性结果

5 Alpha35

$$Alpha = (MIN(RANK(DECAYLINEAR(DELTA(OPEN, 1), 15)), RANK(DECAYLINEAR(CORR((VOLUME), ((OPEN * 0.65) + (OPEN * 0.35)), 17), 7))) * -1) \quad (4)$$

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	2.22	11.45	28.58	3.62(0.229)	2.76	0.61	16.03	2.29	995 X 819	19.98	14.01	2.91	0.0198
20110101-20111231	10.0	-10.0	1.64	8.39	24.76	3.24(0.205)	2.36	0.56	13.56	1.88	1173 X 973	-27.26	-39.34	44.04	0.0152
20120101-20121231	10.0	-10.0	2.71	13.92	25.91	5.62(0.355)	2.87	0.64	21.48	4.12	1297 X 1076	16.63	3.25	11.21	0.0266
20130101-20131231	10.0	-9.99	2.13	11.21	27.56	3.67(0.232)	2.92	0.58	16.27	2.34	1342 X 1104	33.69	19.03	-11.3	0.0177
20140101-20141231	10.01	-9.96	0.79	4.03	26.39	1.38(0.087)	7.05	0.57	6.11	0.54	1381 X 1130	40.42	35.54	-32.53	0.0084
20150101-20151231	10.02	-9.87	4.71	24.25	25.71	4.03(0.255)	11.08	0.61	37.78	3.91	1504 X 1201	91.27	46.78	-43.74	0.0263
20160101-20161231	10.0	-9.84	2.02	10.41	25.76	3.18(0.201)	3.93	0.62	16.2	2.02	1593 X 1272	-5.84	-15.42	26.97	0.017
20170101-20171231	9.99	-9.85	2.17	11.19	23.75	4.14(0.262)	2.37	0.64	18.88	2.84	1800 X 1449	-11.18	0.88	33.93	0.0207
20180101-20181228	9.99	-9.97	2.58	13.28	24.01	4.53(0.287)	2.67	0.59	22.14	3.37	1916 X 1596	-32.3	-38.75	58.99	0.0211
20100104-20181228	10.0	-9.94	20.97	12.01	25.82	3.52(0.223)	11.1	0.6	18.62	2.4	1445 X 1180	13.94	2.87	10.09	0.0192

Figure 9: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.6712	3.36	8.44	2.87	3.4	124	213796_v1v2_n_191004_16
0.6589	5.11	6.02	3.08	3.99	98	214728_fac117
0.6542	3.61	11.14	2.43	3.02	95	214843_pv_model_5_gen4_191114_2

Figure 10: 相关性结果

6 Alpha36

$$Alpha = RANK(SUM((CORR(RANK(VOLUME), RANK(VWAP)), 6), 2)) \quad (5)$$

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	-2.09	-10.79	50.33	-5.16(-0.327)	21.62	0.39	-8.58	-2.39	803 X 803	3.73	14.01	-25.32	-0.0195
20110101-20111231	10.0	-10.0	-2.38	-12.2	49.51	-6.45(-0.408)	23.9	0.34	-9.85	-3.2	951 X 951	-45.82	-39.34	21.42	-0.0223
20120101-20121231	10.0	-10.0	-2.58	-13.27	48.73	-7.32(-0.463)	26.81	0.3	-10.89	-3.82	1090 X 1091	-7.6	3.25	-18.94	-0.0255
20130101-20131231	10.0	-10.0	-2.33	-12.21	47.58	-7.03(-0.445)	23.4	0.31	-10.27	-3.56	1154 X 1154	12.68	19.03	-37.12	-0.0216
20140101-20141231	9.99	-10.0	-1.49	-7.6	48.11	-4.26(-0.269)	17.69	0.37	-6.32	-1.69	1127 X 1127	31.0	35.54	-46.18	-0.0143
20150101-20151231	9.96	-9.98	-3.14	-16.07	51.07	-4.96(-0.314)	31.57	0.33	-12.62	-2.79	1110 X 1112	59.04	46.78	-91.08	-0.0204
20160101-20161231	9.95	-9.99	-2.45	-12.61	48.68	-7.49(-0.474)	25.03	0.31	-10.36	-3.81	1279 X 1282	-23.45	-15.42	-1.82	-0.0227
20170101-20171231	9.95	-10.0	-2.68	-13.75	48.09	-7.52(-0.476)	26.91	0.3	-11.44	-4.02	1491 X 1494	-31.69	0.88	4.1	-0.0249
20180101-20181228	9.99	-10.0	-1.75	-9.03	46.58	-4.45(-0.281)	17.55	0.41	-7.75	-1.96	1661 X 1657	-45.46	-38.75	27.38	-0.0138
20100104-20181228	9.98	-10.0	-20.89	-11.95	48.74	-5.78(-0.366)	209.97	0.34	-9.81	-2.86	1185 X 1186	-5.31	2.87	-18.58	-0.0206

Figure 11: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.5307	3.7	1.91	-1.18	1.96	93	215014_fac179
0.4957	5.13	4.28	-0.06	3.52	170	211934_my_H137
0.4671	3.32	1.31	-0.53	1.04	170	211936_my_H581

Figure 12: 相关性结果

7 Alpha37

$$Alpha = (-1 * RANK(((SUM(OPEN, 5) * SUM(RET, 5)) - DELAY((SUM(OPEN, 5) * SUM(RET, 5)), 10)))) \tag{6}$$

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	3.79	19.56	53.05	5.99(0.379)	2.36	0.67	14.75	3.63	896 X 898	31.17	14.01	7.96	0.0365
20110101-20111231	10.0	-10.0	2.25	11.52	52.11	4.9(0.31)	3.18	0.62	8.84	2.3	1064 X 1064	-26.35	-39.34	49.39	0.0233
20120101-20121231	10.0	-9.99	2.05	10.54	52.53	4.35(0.275)	3.23	0.63	8.03	1.95	1181 X 1182	14.18	3.25	6.9	0.0232
20130101-20131231	10.0	-9.99	2.11	11.1	52.94	4.31(0.273)	1.58	0.63	8.39	1.97	1222 X 1224	32.94	19.03	-10.77	0.0207
20140101-20141231	10.01	-9.97	3.61	18.44	52.29	7.64(0.483)	1.84	0.71	14.1	4.53	1254 X 1252	51.14	35.54	-14.39	0.0323
20150101-20151231	10.02	-9.92	2.01	10.34	50.28	1.01(0.064)	21.54	0.59	8.22	0.46	1354 X 1345	75.85	46.78	-55.83	0.0129
20160101-20161231	10.0	-9.98	1.2	6.12	51.92	1.39(0.088)	7.01	0.57	4.72	0.48	1431 X 1431	-8.19	-15.42	20.48	0.013
20170101-20171231	10.0	-9.99	0.51	2.6	51.61	0.89(0.056)	5.6	0.54	2.02	0.2	1621 X 1616	-18.47	0.88	23.71	0.008
20180101-20181228	9.98	-10.0	1.38	7.13	51.06	2.41(0.153)	5.1	0.53	5.58	0.9	1755 X 1754	-38.13	-38.75	52.33	0.0122
20100104-20181228	10.0	-9.98	18.91	10.81	51.97	2.43(0.154)	21.58	0.61	8.32	1.11	1309 X 1308	12.68	2.87	8.95	0.0202

Figure 13: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.7116	3.55	3.35	0.29	2.38	170	211930_h_ori138
0.6672	3.0	3.42	3.17	1.47	104	214471_pv_model_1_4_191101_39
0.6646	7.49	7.75	4.08	5.23	94	214969_pv_model_8_mod_gen2_191114_186

Figure 14: 相关性结果

8 Alpha38

$$Alpha = (((SUM(HIGH, 20)/20) < HIGH)?(-1 * DELTA(HIGH, 2)) : 0) \tag{7}$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	10.0	-9.99	-4.5	-23.32	95.6	-2.12(-0.134)	44.97	0.43	-9.72	-1.05	835 X 978	-21.38	14.01	-25.08	-0.0078
20110101-20111231	10.01	-10.0	-3.26	-16.74	97.62	-1.65(-0.104)	45.24	0.46	-6.84	-0.68	1004 X 1140	-62.7	-39.34	29.36	-0.0055
20120101-20121231	9.09	-9.1	-4.66	-2442.19	97.31	-1.02(-0.065)	52.25	0.4	-10.85	-5.12	1038 X 1097	-69.1	-15.06	16.33	-0.005
20130101-20131231	3.74	-3.74	-0.68	-512.26	84.08	-0.91(-0.058)	46.41	0.19	-4.57	-2.26	376 X 404	57.86	20.38	-77.01	0.0101
20140101-20141231	6.78	-5.67	-1.84	-7389.42	77.5	-1.18(-0.075)	75.04	0.36	-7.78	-11.52	844 X 806	14.51	37.13	-50.43	0.0097
20150101-20151231	7.36	-5.24	-1.7	-526.29	74.7	-1.3(-0.082)	73.15	0.41	-7.4	-3.45	1091 X 767	3.76	28.11	-38.56	0.0076
20160101-20161231	9.56	-4.54	0.27	-1.03	56.7	-0.06(-0.004)	28.24	0.54	1.37	-0.01	1493 X 1284	-43.66	-17.89	97.92	0.002
20170101-20171231	9.54	-6.15	-0.38	-3.66	71.01	-0.28(-0.017)	25.97	0.54	-1.4	-0.06	1934 X 1277	-63.78	0.88	92.64	0.001
20180101-20181228	9.84	-6.91	0.43	-0.21	76.75	-0.01(-0.001)	32.06	0.49	1.37	-0.0	1654 X 1767	-48.01	-38.75	74.71	0.0027
20100104-20181228	8.45	-6.82	-16.33	-1218.62	82.8	-0.54(-0.034)	228.99	0.42	-5.91	-2.07	1143 X 1059	-34.67	-1.2	15.57	0.0016

Figure 15: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.3364	2.95	7.69	4.14	2.23	131	213518_h4307
0.3273	2.97	7.38	5.44	1.71	170	211938_my_T3
0.2709	4.46	10.97	7.26	1.93	96	214792_fac242

Figure 16: 相关性结果

9 Alpha39

$$Alpha = ((RANK(DECAYLINEAR(DELTA((CLOSE), 2), 8)) - RANK(DECAYLINEAR(CORR(((VWAP * 0.3)+ (OPEN * 0.7)), SUM(MEAN(VOLUME, 180), 37), 14), 12))) * -1) \tag{8}$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	8.52	-8.51	3.2	16.51	28.77	3.06(0.193)	4.8	0.45	26.98	2.32	65 X 66	37.88	9.01	0.92	0.029
20110101-20111231	10.0	-10.0	2.42	12.42	23.02	3.9(0.247)	3.12	0.59	21.58	2.87	150 X 149	-24.02	-39.34	48.86	0.0262
20120101-20121231	10.0	-10.0	1.96	10.09	23.01	3.68(0.233)	2.48	0.58	17.54	2.44	241 X 249	14.34	3.25	5.83	0.0219
20130101-20131231	10.01	-9.99	2.58	13.53	26.84	5.14(0.325)	2.23	0.62	20.17	3.65	759 X 765	39.04	19.03	-12.01	0.0227
20140101-20141231	10.01	-9.98	2.68	13.67	23.8	6.02(0.38)	2.48	0.66	22.97	4.56	1106 X 1105	51.82	35.54	-24.59	0.0237
20150101-20151231	10.02	-9.96	5.05	25.95	23.03	3.4(0.215)	12.27	0.61	44.97	3.61	1183 X 1155	98.49	46.78	-47.17	0.0268
20160101-20161231	10.0	-9.99	2.34	11.98	21.58	3.34(0.211)	4.91	0.63	22.2	2.49	1259 X 1246	1.3	-15.42	22.66	0.0218
20170101-20171231	10.0	-10.0	0.67	3.41	20.9	1.21(0.077)	5.23	0.55	6.53	0.49	1379 X 1385	-12.03	0.88	18.86	0.0112
20180101-20181228	9.99	-10.0	1.73	8.88	22.43	3.31(0.209)	4.28	0.63	15.83	2.08	1575 X 1598	-30.7	-38.75	48.41	0.0177
20100104-20181228	9.84	-9.83	22.62	12.94	23.61	3.21(0.203)	12.49	0.59	22.27	2.37	858 X 859	19.26	2.31	7.02	0.0223

Figure 17: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.782	3.52	4.18	1.13	1.74	93	215029_pv_model_10_mod_gen2_191114_206
0.7505	3.41	6.33	4.46	2.66	170	211919_my_94
0.7464	3.48	4.27	2.16	4.56	170	211919_my_11

Figure 18: 相关性结果

10 Alpha40

$$Alpha = SUM((CLOSE > DELAY(CLOSE, 1)?VOLUME : 0), 26)/ SUM((CLOSE <= DELAY(CLOSE, 1)?VOLUME : 0), 26) * 100 \tag{9}$$

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	-2.59	-13.35	36.58	-3.2(-0.203)	27.68	0.4	-14.6	-1.94	505 X 672	-1.92	14.01	-24.78	-0.0197
20110101-20111231	10.0	-10.0	-2.33	-11.91	36.48	-3.37(-0.213)	24.17	0.43	-13.07	-1.93	598 X 819	-49.02	-39.34	25.19	-0.0197
20120101-20121231	10.0	-10.0	-2.42	-12.46	35.9	-4.75(-0.301)	24.31	0.38	-13.88	-2.8	772 X 1040	-12.34	3.25	-12.57	-0.0218
20130101-20131231	10.0	-10.0	-2.25	-11.81	34.8	-3.19(-0.202)	22.74	0.45	-13.57	-1.86	943 X 1273	9.11	19.03	-32.71	-0.0161
20140101-20141231	10.0	-10.0	-0.79	-4.06	34.8	-1.15(-0.073)	17.38	0.42	-4.66	-0.39	900 X 1216	30.29	35.54	-38.39	-0.0078
20150101-20151231	9.33	-9.34	-5.09	447.06	38.28	0.36(0.023)	55.51	0.32	-29.22	1.24	791 X 1033	27.57	41.36	-83.42	-0.0303
20160101-20161231	9.86	-9.88	-2.84	199.76	37.76	0.94(0.06)	30.24	0.34	-15.61	2.17	1019 X 1347	-33.03	-16.71	3.52	-0.02
20170101-20171231	10.0	-10.0	-1.62	-8.28	34.28	-2.54(-0.161)	17.05	0.43	-9.66	-1.25	1203 X 1633	-28.01	0.88	11.45	-0.0161
20180101-20181228	9.99	-10.0	-3.0	-15.42	33.57	-5.35(-0.339)	29.99	0.33	-18.38	-3.63	1394 X 1820	-59.78	-38.75	28.9	-0.0228
20100104-20181228	9.91	-9.91	-22.92	63.6	35.81	0.15(0.01)	232.53	0.39	-14.77	0.2	903 X 1206	-13.32	2.12	-13.12	-0.0194

Figure 19: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.6478	3.2	2.6	4.1	1.25	159	212322_ld3_25
0.5771	3.13	2.66	2.51	1.56	85	215417_fac53
0.5495	2.51	2.15	-0.71	1.1	92	215072_fac156

Figure 20: 相关性结果

11 总结

31-40因子当中，还是有一些比较不错的因子（这里仅考虑高IC，因为收益为负时，将因子值取相反数即可），Alpha31/Alpha34/Alpha36。

alpha31逻辑是低买高卖。但该策略在2017年效果较差。

alpha32因子认为，high和volume越负相关，该股票越好，即放量下跌和缩量上涨。

alpha34也是低买高卖。同样的，在2017年效果较差

alpha35也是open和high越负相关则股票越好。

alpha36也是成交量和vwap的关系，从结果显示，量加背离较好。

alpha37是低买高卖

alpha40也是成交量/价格和低买高卖。分子是上涨时成交量会加入分子，分母是下跌会加入分母。当因子值大，说明26日内上涨天数多。若上涨天数差不多时，则因子值越大，说明放量上涨或者缩量下跌。从结果来看，该因子值越大，则股票越差，也反映了低买高卖/放量下跌/缩量上涨的收益较高。