

国泰君安191因子回测-51-60

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 15, 2020

1 Alpha51

$$\begin{aligned}
 Alpha = & SUM(((HIGH + LOW) \leq (DELAY(HIGH, 1) + DELAY(LOW, 1)))? \\
 & 0 : MAX(ABS(HIGH - DELAY(HIGH, 1)), ABS(LOW - DELAY(LOW, 1))), 12) / \\
 & (SUM(((HIGH + LOW) \leq (DELAY(HIGH, 1) + DELAY(LOW, 1)))? \\
 & 0 : MAX(ABS(HIGH - DELAY(HIGH, 1)), ABS(LOW - DELAY(LOW, 1))), 12) + \\
 & SUM(((HIGH + LOW) \geq (DELAY(HIGH, 1) + DELAY(LOW, 1)))? \\
 & 0 : MAX(ABS(HIGH - DELAY(HIGH, 1)), ABS(LOW - DELAY(LOW, 1))), 12))
 \end{aligned} \tag{1}$$

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	-3.02	-15.59	38.93	-3.1(-0.196)	32.59	0.41	-16.01	-1.96	859 X 919	-6.3	14.01	-24.87	-0.0272
20110101-20111231	10.0	-10.0	-1.95	-9.98	36.61	-2.59(-0.164)	23.4	0.45	-10.9	-1.35	997 X 1104	-48.47	-39.34	28.52	-0.0196
20120101-20121231	10.0	-10.0	-2.44	-12.54	37.76	-3.46(-0.219)	26.97	0.39	-13.28	-1.99	1134 X 1201	-11.47	3.25	-13.61	-0.0271
20130101-20131231	10.0	-10.0	-2.55	-13.4	38.38	-3.6(-0.228)	25.94	0.4	-13.97	-2.13	1170 X 1219	7.8	19.03	-34.6	-0.0227
20140101-20141231	10.0	-10.0	-1.42	-7.23	38.79	-1.98(-0.125)	22.3	0.42	-7.46	-0.85	1178 X 1193	25.22	35.54	-39.68	-0.0146
20150101-20151231	9.99	-9.98	-7.3	-37.63	38.69	-4.45(-0.281)	74.72	0.39	-38.74	-4.39	1266 X 1187	23.94	46.78	-98.93	-0.0336
20160101-20161231	9.98	-10.0	-3.17	-16.23	35.56	-4.36(-0.276)	31.74	0.4	-18.26	-2.95	1370 X 1370	-31.75	-15.42	-0.74	-0.0208
20170101-20171231	9.99	-10.0	-0.18	-0.94	34.69	-0.28(-0.018)	6.46	0.46	-1.09	-0.05	1559 X 1564	-21.5	0.88	19.6	-0.0054
20180101-20181231	9.99	-10.0	-2.22	-11.41	36.86	-3.28(-0.208)	22.2	0.42	-12.38	-1.83	1690 X 1724	-57.65	-38.75	34.82	-0.0192
20190101-20191231	9.98	-10.0	-3.76	-19.29	38.37	-6.6(-0.417)	37.92	0.35	-20.12	-4.68	1756 X 1854	-0.63	26.71	-37.93	-0.0297
20200101-20200331	9.97	-10.0	-0.59	-12.7	38.41	-2.26(-0.143)	12.97	0.45	-13.27	-1.3	1773 X 1909	-31.62	-12.47	6.09	-0.0187
20100104-20200331	9.99	-10.0	-28.6	-14.39	37.48	-3.19(-0.202)	287.96	0.41	-15.33	-1.98	1309 X 1347	-12.56	4.85	-16.18	-0.0219

Figure 1: 回测结果

Corr	ISSharpe	SemiIOS	OSSharpe	Fitness	OSdays	ID
0.6014	2.51	2.15	-0.71	1.1	92	215072_fac156
0.4859	3.34	1.57	1.6	1.08	170	211936_my_H631
0.4786	3.2	2.6	4.1	1.25	159	212322_ld3_25

Figure 2: 相关性结果

2 Alpha52

$$\begin{aligned}
 Alpha = & SUM(MAX(0, HIGH - DELAY((HIGH + LOW + CLOSE)/3, 1)), 26) / \\
 & SUM(MAX(0, DELAY((HIGH + LOW + CLOSE)/3, 1) - L), 26) * 100
 \end{aligned} \tag{2}$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	9.88	-9.41	3.38	23.57	57.23	1.51(0.096)	26.41	0.5	12.65	0.97	821 X 948	62.08	14.01	-28.1	-0.0029
20110101-20111231	9.83	-9.78	10.19	51.97	49.73	2.92(0.185)	22.14	0.55	42.81	2.98	1006 X 1094	65.26	-39.34	41.15	0.0087
20120101-20121231	9.66	-9.92	0.16	2.37	77.48	0.16(0.01)	20.54	0.49	0.44	0.03	1149 X 1195	17.41	3.25	-15.27	-0.008
20130101-20131231	8.84	-9.37	6.96	37.8	73.71	2.1(0.133)	63.06	0.5	21.79	1.51	1234 X 1194	145.26	19.03	-59.02	0.005
20140101-20141231	8.4	-8.75	6.0	25.25	85.84	1.32(0.083)	31.34	0.5	16.65	0.71	1238 X 1222	82.84	35.54	-9.48	0.0045
20150101-20151231	7.43	-8.73	2.3	14.77	92.02	0.69(0.043)	50.25	0.54	6.34	0.28	1346 X 1270	78.59	46.78	-39.9	0.0031
20160101-20161231	8.72	-9.57	0.72	4.67	102.59	0.2(0.013)	56.44	0.5	1.57	0.04	1507 X 1333	3.97	-15.42	4.07	0.0017
20170101-20171231	9.65	-9.29	1.79	13.18	124.71	0.65(0.041)	27.16	0.51	3.11	0.21	1562 X 1639	-35.87	0.88	57.05	0.0003
20180101-20181231	9.81	-9.84	6.78	35.9	94.84	2.04(0.129)	24.05	0.55	14.97	1.25	1652 X 1838	-65.68	-38.75	136.38	0.0002
20190101-20191231	9.83	-10.01	1.93	9.19	30.38	0.92(0.058)	43.99	0.39	13.12	0.51	1657 X 1947	68.8	26.71	-47.85	-0.0175
20200101-20200331	9.95	-10.01	-0.67	-14.34	28.16	-1.88(-0.119)	15.76	0.43	-20.45	-1.34	1547 X 2129	-39.75	-12.47	10.82	-0.0196
20100104-20200331	9.22	-9.48	39.55	20.99	76.98	1.17(0.074)	60.44	0.5	11.04	0.61	1323 X 1386	38.06	4.85	4.87	-0.0009

Figure 3: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.1015	2.95	0.96	-0.61	1.12	170	211937_my_H894
0.0976	6.59	3.66	1.59	2.76	170	211934_my_H13
0.0962	3.69	3.6	3.64	1.08	170	211935_my_H548

Figure 4: 相关性结果

3 Alpha53

$$Alpha = COUNT(CLOSE > DELAY(CLOSE, 1), 12) / 12 * 100 \quad (3)$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	10.0	-10.0	-2.94	-15.19	36.09	-4.44(-0.281)	31.17	0.37	-16.84	-2.88	910 X 906	-7.33	14.01	-23.06	-0.02
20110101-20111231	10.0	-10.0	-1.0	-5.14	35.55	-2.06(-0.131)	13.68	0.45	-5.79	-0.79	1063 X 1084	-39.1	-39.34	28.81	-0.0073
20120101-20121231	10.0	-10.0	-0.86	-4.42	36.02	-1.92(-0.122)	11.74	0.43	-4.9	-0.67	1188 X 1186	2.24	3.25	-11.07	-0.0072
20130101-20131231	10.0	-10.01	-2.04	-10.69	35.1	-3.24(-0.205)	22.33	0.41	-12.19	-1.79	1276 X 1171	14.07	19.03	-35.42	-0.0123
20140101-20141231	9.99	-10.02	-2.19	-11.15	32.08	-2.68(-0.17)	24.53	0.44	-13.91	-1.58	1442 X 1069	32.81	35.54	-54.96	-0.01
20150101-20151231	9.93	-10.08	-3.77	-19.25	23.63	-1.04(-0.066)	74.2	0.52	-32.68	-0.94	1685 X 1019	51.85	46.78	-89.4	0.0042
20160101-20161231	9.88	-9.99	-1.8	-9.35	30.39	-1.18(-0.075)	22.43	0.47	-12.24	-0.66	1652 X 1213	-17.86	-15.42	-0.84	-0.0021
20170101-20171231	9.91	-9.97	-0.1	-0.52	32.56	-0.15(-0.009)	7.83	0.51	-0.63	-0.02	1806 X 1443	-20.95	0.88	19.82	0.0041
20180101-20181231	9.98	-9.98	1.03	5.31	34.68	1.3(0.083)	5.54	0.55	6.12	0.51	1928 X 1584	-41.21	-38.75	51.84	0.0118
20190101-20191231	9.98	-9.96	-1.74	-8.93	42.33	-3.67(-0.232)	17.44	0.39	-8.45	-1.68	1808 X 1809	11.79	26.71	-29.73	-0.0127
20200101-20200331	9.98	-9.96	-0.37	-8.01	41.61	-1.93(-0.122)	8.03	0.5	-7.69	-0.85	1870 X 1819	-26.35	-12.47	10.38	-0.0112
20100104-20200331	9.97	-10.0	-15.78	-7.93	34.02	-1.14(-0.072)	159.9	0.46	-9.33	-0.55	1486 X 1262	-1.96	4.85	-13.9	-0.0053

Figure 5: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.576	4.45	3.15	1.02	1.72	130	213539_h6754
0.5677	2.86	4.48	5.68	1.5	104	214471_pv_model_1_4_191101_93
0.5652	2.93	5.4	6.73	2.11	96	214801_pv_model_1_gen4_191114_207

Figure 6: 相关性结果

4 Alpha54

$$Alpha = (-1 * RANK((STD(ABS(CLOSE - OPEN), 10) + (CLOSE - OPEN)) + CORR(CLOSE, OPEN, 10))) \quad (4)$$

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	5.04	26.03	107.29	8.31(0.526)	2.89	0.75	9.71	4.09	898 X 896	38.67	14.01	13.41	0.0454
20110101-20111231	10.0	-10.0	3.57	18.29	105.39	8.2(0.519)	1.27	0.73	6.94	3.42	1062 X 1061	-18.49	-39.34	55.07	0.0348
20120101-20121231	10.0	-10.0	2.89	14.84	100.58	7.34(0.464)	1.44	0.68	5.9	2.82	1176 X 1180	18.31	3.25	11.37	0.0302
20130101-20131231	10.01	-10.0	5.34	28.05	101.75	10.16(0.643)	1.73	0.73	11.03	5.33	1210 X 1212	53.54	19.03	2.54	0.0453
20140101-20141231	10.01	-9.99	5.42	27.65	99.33	11.81(0.747)	1.19	0.8	11.13	6.23	1219 X 1236	62.16	35.54	-6.93	0.0452
20150101-20151231	9.97	-10.0	8.3	42.5	98.32	5.58(0.353)	6.91	0.65	17.31	3.67	1281 X 1301	111.4	46.78	-26.04	0.0419
20160101-20161231	9.99	-9.99	4.07	20.88	102.59	6.77(0.428)	2.01	0.72	8.14	3.05	1389 X 1395	7.46	-15.42	34.3	0.0365
20170101-20171231	10.0	-9.99	2.67	13.71	101.07	6.07(0.384)	1.65	0.7	5.43	2.24	1587 X 1591	-6.78	0.88	34.2	0.0254
20180101-20181231	10.01	-9.99	2.59	13.31	103.25	5.86(0.37)	2.72	0.68	5.16	2.1	1729 X 1737	-29.09	-38.75	55.78	0.0218
20190101-20191231	10.01	-9.99	2.59	13.25	106.01	6.22(0.393)	2.46	0.64	5.0	2.2	1802 X 1812	33.76	26.71	-7.28	0.0205
20200101-20200331	10.0	-10.01	0.6	13.0	104.09	4.11(0.26)	1.67	0.59	5.0	1.45	1845 X 1841	1.38	-12.47	24.63	0.0166
20100104-20200331	10.0	-10.0	43.08	21.63	102.59	6.32(0.4)	6.89	0.71	8.44	2.9	1348 X 1354	26.44	4.85	16.84	0.0343

Figure 7: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.8187	7.75	4.7	2.2	3.56	170	211930_h_ori160
0.6922	5.11	10.58	5.23	3.76	123	213876_gpd1_v1v2_191006_87
0.6764	3.76	4.38	4.55	1.78	170	211919_my_176

Figure 8: 相关性结果

5 Alpha55

$$\begin{aligned}
 Alpha = & SUM(16 * (CLOSE - DELAY(CLOSE, 1) + (CLOSE - OPEN)/2 + DELAY(CLOSE, 1) - DELAY(OPEN, 1))) / \\
 & ((ABS(HIGH - DELAY(CLOSE, 1)) > ABS(LOW - DELAY(CLOSE, 1))) \& \\
 & ABS(HIGH - DELAY(CLOSE, 1)) > ABS(HIGH - DELAY(LOW, 1)))? \\
 & ABS(HIGH - DELAY(CLOSE, 1)) + ABS(LOW - DELAY(CLOSE, 1)) / 2 + \\
 & ABS(DELAY(CLOSE, 1) - DELAY(OPEN, 1)) / 4 : \\
 & (ABS(LOW - DELAY(CLOSE, 1)) > ABS(HIGH - DELAY(LOW, 1))) \& \\
 & ABS(LOW - DELAY(CLOSE, 1)) > ABS(HIGH - DELAY(CLOSE, 1)))? \\
 & ABS(LOW - DELAY(CLOSE, 1)) + ABS(HIGH - DELAY(CLOSE, 1)) / 2 + \\
 & ABS(DELAY(CLOSE, 1) - DELAY(OPEN, 1)) / 4 : ABS(HIGH - DELAY(LOW, 1)) + \\
 & ABS(DELAY(CLOSE, 1) - DELAY(OPEN, 1)) / 4))) * \\
 & MAX(ABS(HIGH - DELAY(CLOSE, 1)), ABS(LOW - DELAY(CLOSE, 1))), 20)
 \end{aligned}
 \tag{5}$$

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	-2.69	-13.87	27.6	-2.21(-0.14)	35.04	0.47	-20.11	-1.56	829 X 885	-10.2	14.01	-17.55	-0.0029
20110101-20111231	10.0	-10.0	-0.94	-4.8	22.04	-0.82(-0.052)	12.79	0.45	-8.71	-0.38	1087 X 939	-40.11	-39.34	30.51	-0.0011
20120101-20121231	10.0	-10.0	-1.97	-10.13	24.37	-1.72(-0.109)	20.54	0.44	-16.63	-1.11	1152 X 1109	-7.64	3.25	-12.62	-0.0026
20130101-20131231	10.0	-10.0	-1.64	-8.64	24.23	-1.31(-0.083)	17.68	0.42	-14.25	-0.78	934 X 1353	10.31	19.03	-27.58	-0.0025
20140101-20141231	10.0	-10.0	-0.97	-4.93	25.87	-0.66(-0.042)	23.44	0.46	-7.62	-0.29	934 X 1260	24.31	35.54	-34.17	-0.0013
20150101-20151231	10.01	-10.05	1.36	7.87	26.45	0.62(0.039)	43.58	0.48	10.54	0.34	889 X 1183	87.03	46.78	-72.84	0.0003
20160101-20161231	10.0	-10.0	-2.02	-10.37	27.16	-1.63(-0.103)	27.46	0.45	-15.27	-1.01	1158 X 1317	-38.2	-15.42	17.46	-0.0019
20170101-20171231	10.0	-10.0	-0.57	-2.91	24.22	-0.55(-0.035)	10.98	0.48	-4.8	-0.19	1363 X 1540	-23.08	0.88	17.27	-0.0016
20180101-20181231	10.0	-10.01	-2.61	-13.38	24.76	-2.73(-0.173)	27.33	0.42	-21.68	-2.01	1770 X 1494	-53.8	-38.75	26.93	-0.0036
20190101-20191231	9.99	-10.0	-1.05	-5.23	23.19	-0.75(-0.048)	22.33	0.43	-9.3	-0.36	1673 X 1903	18.29	26.71	-29.06	-0.002
20200101-20200331	9.95	-10.01	0.16	3.37	24.81	0.5(0.031)	9.51	0.45	5.64	0.18	1355 X 2305	-13.69	-12.47	20.58	-0.0007
20100104-20200331	10.0	-10.01	-12.93	-6.39	24.99	-0.89(-0.056)	137.72	0.45	-10.39	-0.45	1184 X 1322	-3.53	4.85	-9.45	-0.0019

Figure 9: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.2439	3.2	2.6	4.1	1.25	159	212322_ld3_25
0.2301	2.51	2.15	-0.71	1.1	92	215072_fac156
0.2285	3.65	1.18	0.49	1.4	157	212376_t20_h35

Figure 10: 相关性结果

6 Alpha56

$$\begin{aligned}
 Alpha = & - (RANK((OPEN - TSMIN(OPEN, 12))) * RANK(CORR(SUM(((HIGH + LOW)/2), 19), \\
 & SUM(MEAN(VOLUME, 40), 19), 13)))
 \end{aligned}
 \tag{6}$$

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	2.31	11.91	42.92	3.15(0.199)	3.49	0.61	11.1	1.66	327 X 219	23.19	14.01	0.62	0.0182
20110101-20111231	10.0	-10.0	1.53	7.84	48.03	2.63(0.167)	3.03	0.59	6.53	1.06	405 X 271	-25.65	-39.34	41.34	0.0156
20120101-20121231	10.0	-10.0	1.86	9.58	42.97	3.4(0.215)	4.71	0.66	8.92	1.61	670 X 452	11.24	3.25	7.92	0.0205
20130101-20131231	10.0	-10.0	1.96	10.3	35.9	3.22(0.204)	4.26	0.56	11.47	1.73	1212 X 802	33.41	19.03	-12.83	0.0154
20140101-20141231	10.0	-10.0	2.27	11.57	34.44	3.63(0.23)	5.33	0.64	13.44	2.11	1093 X 736	47.82	35.54	-24.67	0.0213
20150101-20151231	10.0	-9.99	4.63	23.74	32.27	4.39(0.278)	4.79	0.64	29.42	3.77	858 X 590	89.44	46.78	-42.05	0.028
20160101-20161231	10.0	-10.0	2.24	11.49	37.98	5.46(0.345)	2.57	0.65	12.1	3.0	1211 X 823	-4.57	-15.42	27.55	0.0216
20170101-20171231	10.0	-10.0	0.39	1.99	39.09	0.9(0.057)	4.08	0.52	2.04	0.2	1484 X 1015	-15.29	0.88	19.27	0.0058
20180101-20181231	10.0	-10.0	1.89	9.7	40.57	4.51(0.285)	2.24	0.66	9.57	2.21	1770 X 1200	-25.84	-38.75	45.27	0.0165
20190101-20191231	10.0	-9.99	2.12	10.89	38.31	5.32(0.336)	1.81	0.6	11.37	2.83	2047 X 1365	33.83	26.71	-12.07	0.0153
20200101-20200331	10.01	-9.98	0.52	11.27	32.92	2.2(0.139)	8.06	0.53	13.72	1.29	2122 X 1409	-0.26	-12.47	22.88	0.0165
20100104-20200331	10.0	-10.0	21.72	10.91	39.1	3.39(0.214)	8.07	0.61	11.16	1.79	1132 X 764	16.35	4.85	5.47	0.0178

Figure 11: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.6868	6.45	4.75	1.59	4.08	128	213654_h8075
0.6715	4.48	3.14	1.47	2.82	170	211930_h_ori151
0.662	7.01	5.97	3.49	5.07	159	212322_ld3_30

Figure 12: 相关性结果

7 Alpha57

$$Alpha = SMA((CLOSE - TSMIN(LOW, 9)) / (TSMAX(HIGH, 9) - TSMIN(LOW, 9)) * 100, 3, 1) \quad (7)$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	9.99	-10.0	-3.62	-18.71	29.34	-3.68(-0.233)	38.61	0.39	-25.51	-2.94	875 X 929	-12.21	14.01	-25.2	-0.034
20110101-20111231	10.0	-10.0	-1.88	-9.62	26.9	-2.27(-0.143)	24.07	0.42	-14.3	-1.35	969 X 1168	-47.86	-39.34	28.62	-0.0223
20120101-20121231	9.99	-10.0	-2.76	-14.2	27.61	-3.51(-0.222)	29.84	0.36	-20.57	-2.52	1115 X 1253	-14.88	3.25	-13.52	-0.0313
20130101-20131231	9.98	-10.01	-2.5	-13.15	27.52	-3.57(-0.226)	25.24	0.38	-19.11	-2.47	1193 X 1254	10.28	19.03	-36.5	-0.0232
20140101-20141231	9.95	-10.02	-1.77	-9.04	26.53	-2.58(-0.163)	25.86	0.38	-13.62	-1.51	1253 X 1257	26.04	35.54	-43.86	-0.0174
20150101-20151231	9.87	-10.05	-6.6	-34.17	24.71	-2.73(-0.173)	76.25	0.37	-54.97	-3.21	1387 X 1316	39.18	46.78	-105.73	-0.0336
20160101-20161231	9.87	-10.01	-3.09	-15.82	25.05	-3.17(-0.2)	40.11	0.39	-25.4	-2.52	1360 X 1505	-30.97	-15.42	-1.04	-0.0256
20170101-20171231	9.93	-10.0	-0.03	-0.19	24.37	-0.05(-0.003)	6.37	0.45	-0.29	-0.0	1552 X 1695	-23.41	0.88	22.89	-0.0057
20180101-20181231	9.99	-9.98	-1.68	-8.62	25.88	-2.14(-0.135)	19.41	0.42	-13.34	-1.23	1675 X 1837	-59.6	-38.75	42.4	-0.0164
20190101-20191231	9.97	-10.0	-2.69	-13.78	28.27	-4.15(-0.262)	27.23	0.42	-19.5	-2.89	1737 X 1878	2.76	26.71	-30.28	-0.0209
20200101-20200331	9.96	-10.01	-0.54	-11.55	28.93	-1.95(-0.123)	11.81	0.43	-16.03	-1.23	1781 X 1907	-31.85	-12.47	8.57	-0.0166
20100104-20200331	9.96	-10.01	-27.15	-13.68	26.67	-2.44(-0.154)	274.55	0.4	-20.49	-1.75	1323 X 1421	-11.62	4.85	-15.69	-0.0229

Figure 13: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.6212	2.51	2.15	-0.71	1.1	92	215072_fac156
0.4815	3.54	3.28	2.11	1.59	159	212322_ld3_10
0.4768	2.89	2.62	2.6	2.69	170	211938_my_T53

Figure 14: 相关性结果

8 Alpha58

$$Alpha = COUNT(CLOSE > DELAY(CLOSE, 1), 20) / 20 * 100 \quad (8)$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	10.0	-10.0	-2.24	-11.54	26.19	-3.32(-0.21)	25.63	0.41	-17.64	-2.2	918 X 898	-4.19	14.01	-18.9	-0.0129
20110101-20111231	10.0	-10.0	-0.85	-4.36	26.06	-1.66(-0.105)	10.79	0.46	-6.68	-0.68	1077 X 1069	-37.2	-39.34	28.49	-0.0051
20120101-20121231	10.0	-10.0	-0.65	-3.33	26.53	-1.45(-0.092)	9.0	0.45	-5.03	-0.51	1187 X 1186	3.27	3.25	-9.94	-0.0044
20130101-20131231	10.0	-10.01	-2.33	-12.22	25.52	-3.47(-0.22)	24.77	0.42	-19.16	-2.4	1280 X 1167	14.41	19.03	-38.83	-0.0124
20140101-20141231	10.0	-10.01	-1.59	-8.13	22.12	-1.82(-0.115)	20.28	0.47	-14.7	-1.1	1505 X 1006	39.26	35.54	-55.47	-0.0053
20150101-20151231	9.97	-10.03	-3.37	-17.27	16.1	-0.92(-0.058)	72.08	0.54	-42.91	-0.95	1776 X 928	55.11	46.78	-89.22	0.0072
20160101-20161231	9.95	-9.97	-2.01	-10.38	21.07	-1.23(-0.078)	23.75	0.49	-19.64	-0.86	1740 X 1125	-17.76	-15.42	-2.94	-0.0023
20170101-20171231	9.97	-9.93	-0.18	-0.9	23.54	-0.22(-0.014)	9.05	0.55	-1.53	-0.04	1876 X 1373	-21.47	0.88	19.74	0.0046
20180101-20181231	9.99	-9.97	1.18	6.07	25.17	1.3(0.082)	6.7	0.57	9.64	0.64	1993 X 1520	-41.85	-38.75	54.11	0.0135
20190101-20191231	9.99	-9.93	-1.73	-8.89	32.37	-3.58(-0.226)	17.68	0.39	-11.0	-1.87	1818 X 1798	11.79	26.71	-29.73	-0.0119
20200101-20200331	9.99	-9.92	-0.08	-1.64	32.0	-0.39(-0.025)	4.19	0.47	-2.03	-0.09	1895 X 1793	-18.11	-12.47	14.96	-0.0038
20100104-20200331	9.99	-9.98	-13.84	-6.96	24.63	-0.96(-0.061)	141.22	0.47	-11.31	-0.51	1527 X 1221	-0.29	4.85	-13.64	-0.0029

Figure 15: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.5996	4.45	3.15	1.02	1.72	130	213539_h6754
0.5843	2.93	5.4	6.73	2.11	96	214801_pv_model_1_gen4_191114_207
0.5766	2.86	4.48	5.68	1.5	104	214471_pv_model_1_4_191101_93

Figure 16: 相关性结果

9 Alpha59

$$Alpha = SUM(((CLOSE = DELAY(CLOSE, 1)) ? 0 : CLOSE - (CLOSE > DELAY(CLOSE, 1)) ? MIN(LOW, DELAY(CLOSE, 1)) : MAX(HIGH, DELAY(CLOSE, 1))))) , 20) \quad (9)$$

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	-2.24	-11.54	26.19	-3.32(-0.21)	25.63	0.41	-17.64	-2.2	918 X 898	-4.19	14.01	-18.9	-0.0129
20110101-20111231	10.0	-10.0	-0.85	-4.36	26.06	-1.66(-0.105)	10.79	0.46	-6.68	-0.68	1077 X 1069	-37.2	-39.34	28.49	-0.0051
20120101-20121231	10.0	-10.0	-0.65	-3.33	26.53	-1.45(-0.092)	9.0	0.45	-5.03	-0.51	1187 X 1186	3.27	3.25	-9.94	-0.0044
20130101-20131231	10.0	-10.01	-2.33	-12.22	25.52	-3.47(-0.22)	24.77	0.42	-19.16	-2.4	1280 X 1167	14.41	19.03	-38.83	-0.0124
20140101-20141231	10.0	-10.01	-1.59	-8.13	22.12	-1.82(-0.115)	20.28	0.47	-14.7	-1.1	1505 X 1006	39.26	35.54	-55.47	-0.0053
20150101-20151231	9.97	-10.03	-3.37	-17.27	16.1	-0.92(-0.058)	72.08	0.54	-42.91	-0.95	1776 X 928	55.11	46.78	-89.22	0.0072
20160101-20161231	9.95	-9.97	-2.01	-10.38	21.07	-1.23(-0.078)	23.75	0.49	-19.64	-0.86	1740 X 1125	-17.76	-15.42	-2.94	-0.0023
20170101-20171231	9.97	-9.93	-0.18	-0.9	23.54	-0.22(-0.014)	9.05	0.55	-1.53	-0.04	1876 X 1373	-21.47	0.88	19.74	0.0046
20180101-20181231	9.99	-9.97	1.18	6.07	25.17	1.3(0.082)	6.7	0.57	9.64	0.64	1993 X 1520	-41.85	-38.75	54.11	0.0135
20190101-20191231	9.99	-9.93	-1.73	-8.89	32.37	-3.58(-0.226)	17.68	0.39	-11.0	-1.87	1818 X 1798	11.79	26.71	-29.73	-0.0119
20200101-20200331	9.99	-9.92	-0.08	-1.64	32.0	-0.39(-0.025)	4.19	0.47	-2.03	-0.09	1895 X 1793	-18.11	-12.47	14.96	-0.0038
20100104-20200331	9.99	-9.98	-13.84	-6.96	24.63	-0.96(-0.061)	141.22	0.47	-11.31	-0.51	1527 X 1221	-0.29	4.85	-13.64	-0.0029

Figure 17: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.5996	4.45	3.15	1.02	1.72	130	213539_h6754
0.5843	2.93	5.4	6.73	2.11	96	214801_pv_model_1_gen4_191114_207
0.5766	2.86	4.48	5.68	1.5	104	214471_pv_model_1_4_191101_93

Figure 18: 相关性结果

10 Alpha60

$$Alpha = SUM(((CLOSE - LOW) - (HIGH - CLOSE)) / (HIGH - LOW) * VOLUME, 20) \quad (10)$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	10.0	-10.0	-3.01	-15.53	38.99	-3.18(-0.201)	33.2	0.38	-15.93	-2.0	519 X 775	-15.51	14.01	-15.54	-0.0128
20110101-20111231	10.0	-10.0	-4.24	-21.71	36.89	-6.18(-0.391)	44.2	0.36	-23.54	-4.74	691 X 861	-62.43	-39.34	19.0	-0.0165
20120101-20121231	10.0	-10.0	-3.21	-16.5	35.24	-4.19(-0.265)	32.94	0.38	-18.72	-2.87	785 X 1115	-24.01	3.25	-8.98	-0.0156
20130101-20131231	10.0	-10.0	-5.02	-26.35	34.0	-5.96(-0.377)	51.52	0.34	-31.01	-5.25	897 X 1328	-24.47	19.03	-28.24	-0.0177
20140101-20141231	10.0	-10.0	0.52	2.67	31.18	0.47(0.03)	21.54	0.41	3.41	0.14	846 X 1300	50.77	35.54	-45.45	-0.0028
20150101-20151231	10.01	-10.0	-4.79	-24.49	33.73	-3.42(-0.217)	55.05	0.38	-29.08	-2.92	770 X 1157	4.32	46.78	-53.38	-0.0098
20160101-20161231	10.0	-10.0	-2.71	-13.86	33.94	-4.16(-0.263)	29.49	0.35	-16.34	-2.66	1040 X 1377	-37.19	-15.42	9.46	-0.0115
20170101-20171231	10.01	-10.0	-1.14	-5.85	32.87	-1.21(-0.077)	18.08	0.46	-7.11	-0.51	1209 X 1635	-19.93	0.88	8.24	-0.0068
20180101-20181231	10.0	-10.0	-5.08	-26.13	35.79	-7.57(-0.479)	51.17	0.24	-29.2	-6.47	1455 X 1719	-75.1	-38.75	22.84	-0.0185
20190101-20191231	10.0	-10.01	-3.28	-16.78	35.23	-4.75(-0.301)	33.8	0.39	-19.04	-3.28	1714 X 1747	-7.35	26.71	-26.19	-0.0124
20200101-20200331	10.02	-10.01	-0.65	-14.03	36.98	-2.91(-0.184)	11.0	0.47	-15.08	-1.8	1143 X 1666	-68.92	-12.47	41.11	-0.0103
20100104-20200331	10.0	-10.0	-32.59	-16.36	34.83	-3.52(-0.222)	326.16	0.37	-18.79	-2.41	997 X 1310	-22.15	4.85	-10.57	-0.0124

Figure 19: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.4066	2.58	1.6	2.5	1.46	85	215415_fac16
0.4032	3.2	2.6	4.1	1.25	159	212322_ld3_25
0.3853	6.99	5.39	6.04	4.81	159	212322_ld3_23

Figure 20: 相关性结果

11 总结

51-60因子:

alpha51与alpha49和alpha50有关，经证明，为alpha49的相反数

alpha52因子不显著，其衡量股票的价格信息

alpha53对股票过去12天的涨跌天数计数。

alpha54认为波动越小/收盘价越低/收盘价与开盘价相关性越负的股票，表现越好。

alpha55??

alpha56衡量量价关系。

alpha57为高买低卖

alpha58对股票过去20天的涨跌天数计数。

alpha59选择收盘价高的股票

alpha60衡量量价关系。