

国泰君安191因子回测-161-170

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1 Alpha161

$$Alpha = MEAN(MAX(MAX((HIGH - LOW), ABS(DELAY(CLOSE, 1) - HIGH)), ABS(DELAY(CLOSE, 1) - LOW)), 12) \quad (1)$$

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	-2.34	-12.11	4.15	-1.78(-0.112)	24.99	0.36	-116.76	-3.04	547 X 1252	0.45	14.01	-24.67	-0.0037
20110101-20111231	10.0	-10.0	-0.5	-2.54	3.61	-0.48(-0.03)	13.39	0.49	-28.13	-0.4	654 X 1478	-39.93	-39.34	34.84	-0.0005
20120101-20121231	10.0	-10.0	-0.48	-2.48	3.71	-0.5(-0.031)	17.4	0.45	-26.75	-0.41	667 X 1698	1.29	3.25	-6.25	-0.0012
20130101-20131231	10.0	-10.0	-1.29	-6.77	3.86	-1.12(-0.071)	16.52	0.45	-70.2	-1.48	636 X 1810	15.11	19.03	-28.64	-0.0019
20140101-20141231	9.96	-10.0	-2.02	-10.27	5.19	-1.57(-0.099)	23.35	0.41	-79.43	-2.21	843 X 1665	19.75	35.54	-40.24	-0.0026
20150101-20151231	9.99	-10.0	-1.41	-7.32	4.78	-0.63(-0.04)	43.82	0.48	-60.74	-0.78	882 X 1819	65.71	46.78	-80.15	0.0001
20160101-20161231	10.0	-9.99	-2.17	-11.12	4.47	-1.64(-0.104)	35.14	0.37	-99.39	-2.58	901 X 1962	-36.79	-15.42	14.58	-0.0023
20170101-20171231	10.0	-10.0	-0.83	-4.26	5.02	-0.85(-0.054)	10.21	0.42	-33.89	-0.78	876 X 2366	-28.1	0.88	19.6	-0.0011
20180101-20181231	10.0	-10.0	-1.71	-8.76	4.72	-1.69(-0.107)	24.45	0.47	-74.43	-2.31	880 X 2630	-53.81	-38.75	36.21	-0.0016
20190101-20191231	10.0	-10.0	-1.59	-8.14	4.63	-1.31(-0.083)	26.04	0.42	-70.56	-1.73	903 X 2710	13.94	26.71	-30.25	-0.0019
20200101-20200331	9.99	-10.0	-0.57	-12.22	4.45	-2.08(-0.131)	8.29	0.36	-110.78	-3.44	920 X 2766	-33.15	-12.47	8.5	-0.0036
20100104-20200331	9.99	-10.0	-14.91	-7.49	4.42	-1.12(-0.071)	153.08	0.43	-67.86	-1.46	783 X 1959	-4.95	4.85	-10.03	-0.0017

Figure 1: 回测结果

-0.3736	2.39	4.49	4.34	1.8	151	213024_agen.ZSAlpha_26
-0.3958	3.71	5.91	3.16	2.41	151	213024_agen.ZSAlpha_14
-0.399	2.34	3.86	3.76	1.64	151	213024_agen.ZSAlpha_25

Figure 2: 相关性结果

2 Alpha162

$$Alpha = (SMA(MAX(CLOSE - DELAY(CLOSE, 1), 0), 12, 1) / SMA(ABS(CLOSE - DELAY(CLOSE, 1)), 12, 1) * 100 - MIN(SMA(MAX(CLOSE - DELAY(CLOSE, 1), 0), 12, 1) / SMA(ABS(CLOSE - DELAY(CLOSE, 1)), 12, 1) * 100, 12)) / (MAX(SMA(MAX(CLOSE - DELAY(CLOSE, 1), 0), 12, 1) / SMA(ABS(CLOSE - DELAY(CLOSE, 1)), 12, 1) * 100, 12) - MIN(SMA(MAX(CLOSE - DELAY(CLOSE, 1), 0), 12, 1) / SMA(ABS(CLOSE - DELAY(CLOSE, 1)), 12, 1) * 100, 12)) \quad (2)$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	8.55	-8.54	9.04	-21384.18	79.69	-0.53(-0.034)	18.37	0.59	27.44	-8.7	723 X 720	9.06	7.64	100.39	0.0179
20110101-20111231	9.14	-9.06	9.46	185884.86	75.04	1.36(0.086)	8.07	0.59	28.39	67.63	980 X 878	-28.63	-33.15	135.91	0.0081
20120101-20121231	8.11	-8.07	9.73	139890.39	75.44	1.12(0.071)	21.33	0.57	32.82	48.22	885 X 908	-6.97	1.61	131.08	0.0213
20130101-20131231	5.67	-5.63	6.6	1958.01	70.06	0.19(0.012)	13.05	0.43	35.03	1.02	508 X 751	22.2	17.7	100.81	-0.0082
20140101-20141231	7.3	-7.2	5.74	-22902.86	64.22	-0.99(-0.063)	15.22	0.5	25.13	-18.77	653 X 898	36.0	29.73	44.76	-0.0042
20150101-20151231	6.72	-6.04	6.51	-19775.49	63.6	-1.33(-0.084)	27.51	0.5	32.89	-23.44	1075 X 638	51.33	17.05	53.36	-0.0139
20160101-20161231	9.43	-9.08	3.28	-3130.34	66.02	-0.54(-0.034)	30.23	0.57	11.02	-3.73	1225 X 1284	-6.78	-16.46	44.11	0.001
20170101-20171231	9.97	-9.83	8.1	42.07	38.15	6.66(0.421)	5.14	0.72	43.99	6.99	1985 X 1201	-19.15	0.88	103.94	0.012
20180101-20181231	10.0	-9.25	9.73	51.44	34.06	6.67(0.422)	4.96	0.7	61.06	8.19	2637 X 815	-38.27	-38.75	149.59	0.019
20190101-20191231	9.98	-9.58	25.11	133.16	22.47	9.82(0.621)	8.74	0.76	234.08	23.91	1497 X 1913	26.6	26.71	240.9	0.0197
20200101-20200331	10.0	-9.97	-0.36	-8.22	37.42	-0.79(-0.05)	10.43	0.6	-8.38	-0.37	312 X 675	-28.06	-12.47	12.43	0.0014
20100104-20200331	8.53	-8.27	92.95	25510.19	56.59	0.42(0.027)	33.41	0.59	39.28	9.0	1197 X 994	0.62	0.96	112.22	0.0072

Figure 3: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.3007	2.19	6.16	6.44	1.55	141	213518_h8525
0.2896	4.7	6.97	5.06	3.94	180	211919_my_74
0.2849	3.08	5.33	4.33	2.82	106	214805_pv_model_1_mod_gen4_191114_67

Figure 4: 相关性结果

3 Alpha163

$$Alpha = RANK(((((-1 * RET) * MEAN(VOLUME, 20)) * VWAP) * (HIGH - CLOSE))) \quad (3)$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	10.0	-10.0	1.58	8.15	143.48	1.37(0.087)	7.79	0.56	2.27	0.33	646 X 654	20.76	14.01	-4.44	0.0028
20110101-20111231	10.0	-10.0	1.96	10.05	142.75	1.55(0.098)	6.65	0.52	2.82	0.41	761 X 798	-19.25	-39.34	39.36	0.0033
20120101-20121231	10.0	-10.0	1.27	6.55	148.48	1.16(0.073)	7.48	0.54	1.76	0.24	935 X 988	16.62	3.25	-3.52	0.002
20130101-20131231	10.0	-10.0	0.49	2.6	145.31	0.4(0.025)	10.38	0.53	0.72	0.05	1089 X 1159	28.98	19.03	-23.77	0.001
20140101-20141231	10.0	-10.01	2.1	10.86	148.46	1.46(0.092)	13.46	0.55	2.89	0.39	1116 X 1045	69.43	35.54	-47.91	0.0024
20150101-20151231	9.96	-10.1	3.26	16.3	144.88	1.39(0.088)	12.39	0.55	4.6	0.46	1078 X 958	77.07	46.78	-42.9	0.0023
20160101-20161231	10.0	-10.0	-1.29	-6.63	145.2	-0.8(-0.05)	23.22	0.48	-1.83	-0.17	1236 X 1214	-30.95	-15.42	17.68	-0.0012
20170101-20171231	9.99	-10.0	2.69	13.82	148.48	2.39(0.151)	5.28	0.51	3.72	0.73	1399 X 1485	14.29	0.88	13.31	0.0037
20180101-20181231	10.0	-10.01	2.27	11.75	143.81	1.76(0.112)	5.76	0.51	3.25	0.5	1509 X 1739	-7.56	-38.75	30.92	0.0022
20190101-20191231	10.0	-10.02	3.47	18.1	147.45	2.95(0.187)	11.78	0.63	4.81	1.04	1743 X 1810	42.15	26.71	-6.62	0.0059
20200101-20200331	9.99	-10.0	0.37	7.97	142.72	1.16(0.074)	7.57	0.5	2.23	0.28	1817 X 1831	-14.92	-12.47	30.8	0.0031
20100104-20200331	9.99	-10.01	18.19	9.15	145.76	1.25(0.079)	23.98	0.54	2.51	0.31	1167 X 1200	20.31	4.85	-2.03	0.0025

Figure 5: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.3161	6.21	5.02	1.25	2.95	180	211930_h_ori154
0.3053	5.74	5.52	2.82	3.19	92	215540_pv_model_12_gen2_191122_10
0.3007	3.33	3.55	2.15	1.01	180	211934_my_H177

Figure 6: 相关性结果

4 Alpha164

$$Alpha = SMA((((CLOSE > DELAY(CLOSE, 1)) ? 1 / (CLOSE - DELAY(CLOSE, 1)) : 1) - MIN((((CLOSE > DELAY(CLOSE, 1)) ? 1 / (CLOSE - DELAY(CLOSE, 1)) : 1), 12)) / (HIGH - LOW) * 100, 13, 2) \quad (4)$$

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	0.29	1.65	8.88	0.19(0.012)	21.33	0.42	6.67	0.08	607 X 1205	14.92	14.01	-11.95	-0.0018
20110101-20111231	10.0	-10.0	1.74	8.93	9.95	1.55(0.098)	8.43	0.52	35.89	1.46	577 X 1567	-20.11	-39.34	37.97	0.0032
20120101-20121231	10.0	-10.0	0.36	1.84	8.43	0.35(0.022)	7.77	0.47	8.73	0.16	732 X 1640	6.98	3.25	-3.3	-0.0021
20130101-20131231	10.0	-10.0	-1.0	-5.25	7.98	-0.86(-0.054)	14.88	0.44	-26.33	-0.69	1091 X 1355	7.42	19.03	-17.93	-0.0017
20140101-20141231	10.0	-10.0	3.72	18.99	8.29	2.77(0.175)	8.46	0.51	91.49	4.2	967 X 1543	82.81	35.54	-44.86	0.0032
20150101-20151231	10.0	-10.0	-2.1	-10.95	9.13	-0.73(-0.046)	54.07	0.36	-47.24	-0.79	835 X 1869	43.85	46.78	-65.42	-0.0016
20160101-20161231	10.0	-10.0	0.53	2.73	8.47	0.59(0.038)	11.41	0.46	12.87	0.34	990 X 1874	-4.32	-15.42	9.77	0.0003
20170101-20171231	10.0	-10.0	0.83	4.27	9.19	0.99(0.063)	7.65	0.48	18.6	0.68	935 X 2312	-10.9	0.88	19.45	0.0008
20180101-20181231	10.0	-10.0	0.89	4.59	8.55	1.24(0.078)	5.57	0.51	21.47	0.91	1265 X 2247	-25.18	-38.75	34.37	0.0013
20190101-20191231	10.01	-10.0	2.0	10.1	9.12	1.03(0.065)	14.95	0.45	44.94	1.09	1239 X 2378	36.64	26.71	-16.16	0.0001
20200101-20200331	10.0	-10.0	-0.21	-4.45	7.04	-1.69(-0.107)	5.25	0.45	-25.25	-1.34	1008 X 2680	-35.3	-12.47	26.41	-0.0032
20100104-20200331	10.0	-10.0	7.05	3.53	8.76	0.46(0.029)	57.52	0.46	16.17	0.29	926 X 1821	12.14	4.85	-5.05	0.0001

Figure 7: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.3365	4.28	4.18	-0.98	4.77	151	213024_agen.ZSAlpha_44
0.2848	2.2	1.01	-2.14	3.45	52	213716_Lessgerladminexp2mv
0.2758	2.88	1.37	-2.47	2.0	180	211919_my_2

Figure 8: 相关性结果

5 Alpha165

$$\begin{aligned} Alpha = & MAX(SUMAC(CLOSE - MEAN(CLOSE, 48))) - \\ & MIN(SUMAC(CLOSE - MEAN(CLOSE, 48)))/STD(CLOSE, 48) \end{aligned} \quad (5)$$

公式有误。

6 Alpha166

$$\begin{aligned} Alpha = & -20 * (20 - 1) * 1.5 * SUM(CLOSE/DELAY(CLOSE, 1) - 1 - MEAN(CLOSE/DELAY(CLOSE, 1) - 1, 20), 20)/ \\ & ((20 - 1) * (20 - 2)(SUM((CLOSE/DELAY(CLOSE, 1), 20) * 2, 20)) * 1.5) \end{aligned} \quad (6)$$

公式有误。

7 Alpha167

$$Alpha = SUM((CLOSE - DELAY(CLOSE, 1) > 0 ? CLOSE - DELAY(CLOSE, 1) : 0), 12) \quad (7)$$

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	-2.46	-12.72	7.02	-1.8(-0.114)	26.37	0.36	-72.44	-2.42	547 X 1240	0.57	14.01	-26.0	-0.0038
20110101-20111231	10.0	-10.0	-0.51	-2.59	6.84	-0.47(-0.03)	13.6	0.46	-15.14	-0.29	638 X 1484	-39.32	-39.34	34.14	-0.0006
20120101-20121231	10.0	-10.0	-0.72	-3.68	6.43	-0.73(-0.046)	18.36	0.43	-22.94	-0.55	658 X 1701	0.57	3.25	-7.95	-0.0015
20130101-20131231	9.99	-10.0	-1.86	-9.77	6.86	-1.63(-0.103)	21.48	0.43	-57.05	-1.95	626 X 1820	10.76	19.03	-30.31	-0.0028
20140101-20141231	9.93	-10.01	-2.85	-14.5	8.18	-2.12(-0.134)	31.88	0.4	-71.23	-2.82	827 X 1677	13.21	35.54	-42.13	-0.0032
20150101-20151231	9.99	-10.01	-1.03	-5.25	6.83	-0.46(-0.029)	46.57	0.47	-30.77	-0.4	879 X 1817	71.42	46.78	-81.77	-0.0002
20160101-20161231	9.99	-10.0	-2.59	-13.3	7.27	-1.99(-0.126)	39.55	0.38	-73.04	-2.69	867 X 1991	-39.79	-15.42	13.2	-0.0029
20170101-20171231	10.0	-10.0	-0.61	-3.14	8.35	-0.59(-0.037)	9.25	0.41	-14.85	-0.36	836 X 2392	-25.53	0.88	19.33	-0.0009
20180101-20181231	10.0	-10.0	-2.28	-11.66	7.6	-2.18(-0.138)	29.75	0.44	-61.6	-2.7	875 X 2632	-58.69	-38.75	35.24	-0.0024
20190101-20191231	9.99	-10.0	-1.8	-9.21	7.82	-1.4(-0.088)	27.02	0.41	-47.26	-1.51	888 X 2721	11.86	26.71	-30.33	-0.0021
20200101-20200331	9.98	-10.0	-0.72	-15.42	8.06	-2.72(-0.172)	9.01	0.34	-76.96	-3.76	919 X 2762	-37.65	-12.47	6.59	-0.005
20100104-20200331	9.99	-10.0	-17.41	-8.74	7.34	-1.29(-0.081)	177.61	0.42	-47.68	-1.4	768 X 1967	-6.28	4.85	-11.21	-0.0021

Figure 9: 回测结果

-0.4239	2.39	4.49	4.34	1.8	151	213024_agen.ZSAlpha_26
-0.4408	3.71	5.91	3.16	2.41	151	213024_agen.ZSAlpha_14
-0.453	2.34	3.86	3.76	1.64	151	213024_agen.ZSAlpha_25
+-----+-----+-----+-----+-----+-----+-----+						
Histogram						

Figure 10: 相关性结果

8 Alpha168

$$\text{Alpha} = (-1 * \text{VOLUME} / \text{MEAN}(\text{VOLUME}, 20)) \quad (8)$$

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	3.69	19.04	93.22	4.39(0.278)	4.84	0.63	8.17	1.98	824 X 477	20.29	14.01	17.8	0.0286
20110101-20111231	10.0	-10.0	2.35	12.04	91.33	3.37(0.213)	2.91	0.63	5.28	1.22	1006 X 552	-30.59	-39.34	54.71	0.0197
20120101-20121231	10.0	-10.0	2.76	14.23	91.97	4.39(0.277)	3.48	0.58	6.18	1.73	1240 X 683	7.4	3.25	21.04	0.0227
20130101-20131231	10.0	-10.0	1.78	9.4	89.05	2.36(0.149)	4.57	0.56	4.21	0.77	1447 X 801	27.05	19.03	-8.31	0.0147
20140101-20141231	10.0	-10.0	0.74	3.77	92.62	1.05(0.066)	3.56	0.53	1.63	0.21	1370 X 790	35.35	35.54	-27.81	0.0074
20150101-20151231	9.94	-10.02	3.79	19.53	89.03	2.36(0.149)	17.65	0.56	8.75	1.11	1243 X 793	78.58	46.78	-39.15	0.0185
20160101-20161231	10.0	-9.98	2.45	12.53	89.12	3.27(0.207)	5.75	0.61	5.63	1.22	1561 X 889	-8.51	-15.42	33.64	0.0102
20170101-20171231	9.99	-9.99	0.84	4.33	92.51	1.0(0.063)	8.93	0.6	1.87	0.22	1834 X 1051	-20.81	0.88	29.45	0.0102
20180101-20181231	9.99	-9.98	5.48	28.25	88.82	7.67(0.485)	2.61	0.72	12.71	4.32	2082 X 1167	-32.45	-38.75	89.0	0.0376
20190101-20191231	9.98	-9.99	6.95	35.71	85.68	9.48(0.599)	1.91	0.73	16.66	6.12	2269 X 1284	33.79	26.71	37.58	0.0427
20200101-20200331	9.96	-10.0	0.74	15.77	81.69	1.96(0.124)	9.82	0.62	7.8	0.86	2320 X 1328	-5.85	-12.47	37.65	0.022
20100104-20200331	9.99	-10.0	31.59	15.88	90.15	3.43(0.217)	17.57	0.61	7.04	1.44	1507 X 860	10.56	4.85	21.18	0.0221

Figure 11: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.8387	3.88	7.67	1.93	1.48	180	211930_h ori182
0.7441	4.79	9.19	5.48	3.5	105	214823_pv_model_3_gen4_191114_10
0.7407	4.7	9.11	2.42	2.67	104	214973_pv_model_9_gen4_191114_18

Figure 12: 相关性结果

9 Alpha169

$$\begin{aligned} \text{Alpha} = & \text{SMA}(\text{MEAN}(\text{DELAY}(\text{SMA}(\text{CLOSE} - \text{DELAY}(\text{CLOSE}, 1), 9, 1), 1), 12) - \\ & \text{MEAN}(\text{DELAY}(\text{SMA}(\text{CLOSE} - \text{DELAY}(\text{CLOSE}, 1), 9, 1), 1), 26), 10, 1) \end{aligned} \quad (9)$$

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	-2.08	-10.72	13.98	-1.77(-0.112)	28.83	0.46	-30.68	-1.55	882 X 895	-0.3	14.01	-21.14	-0.0025
20110101-20111231	10.0	-10.0	-0.33	-1.7	11.92	-0.32(-0.02)	10.34	0.45	-5.7	-0.12	1090 X 1023	-36.71	-39.34	33.31	-0.0005
20120101-20121231	10.0	-10.0	-1.42	-7.32	12.03	-1.41(-0.089)	22.18	0.5	-24.32	-1.1	1163 X 1191	-3.98	3.25	-10.65	-0.0013
20130101-20131231	10.0	-10.0	-0.73	-3.78	11.84	-0.6(-0.038)	11.27	0.5	-12.88	-0.34	1166 X 1279	16.6	19.03	-24.23	-0.0012
20140101-20141231	9.98	-10.0	-1.49	-7.53	13.96	-1.13(-0.071)	31.19	0.48	-21.79	-0.83	1227 X 1274	24.75	35.54	-39.88	-0.001
20150101-20151231	9.99	-10.0	2.93	14.96	12.28	1.21(0.077)	25.31	0.54	48.86	1.34	1286 X 1403	99.82	46.78	-69.77	0.0022
20160101-20161231	10.0	-10.0	-1.03	-5.28	13.26	-0.91(-0.058)	19.84	0.47	-15.92	-0.58	1476 X 1376	-32.9	-15.42	22.35	-0.0004
20170101-20171231	10.01	-10.0	-0.8	-4.2	12.82	-0.76(-0.048)	14.49	0.46	-12.74	-0.43	1719 X 1496	-29.38	0.88	21.22	-0.0019
20180101-20181231	10.01	-10.0	-1.79	-9.17	13.53	-1.71(-0.108)	20.93	0.47	-27.21	-1.41	1761 X 1742	-59.16	-38.75	40.79	-0.0023
20190101-20191231	10.0	-10.0	-1.22	-6.24	12.5	-0.9(-0.057)	16.87	0.43	-19.97	-0.64	1815 X 1791	12.96	26.71	-25.44	-0.002
20200101-20200331	10.0	-10.0	-0.16	-3.5	14.31	-0.44(-0.028)	9.05	0.55	-9.91	-0.22	1714 X 1964	-10.05	-12.47	2.95	-0.0018
20100104-20200331	10.0	-10.0	-8.12	-4.08	12.85	-0.59(-0.037)	86.17	0.48	-12.69	-0.33	1368 X 1362	-1.07	4.85	-7.08	-0.0011

Figure 13: 回测结果

-0.1951	2.45	5.32	0.97	1.55	112	214590_pv_model_4_gen2_191114_00
-0.2271	2.41	4.93	2.78	1.53	105	214819_pv_model_2_mod_gen2_191114_42
-0.2583	2.56	5.66	1.53	2.16	106	214811_pv_model_2_mod_gen6_191114_119

Figure 14: 相关性结果

10 Alpha170

Alpha = (((((RANK((1/CLOSE)) * VOLUME)/MEAN(VOLUME, 20))*
((HIGH * RANK((HIGH - CLOSE)))/(SUM(HIGH, 5)/5))) - RANK((VWAP - DELAY(VWAP, 5))))

(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	6.62	34.21	80.34	9.65(0.61)	3.15	0.76	17.03	6.3	675 X 626	44.63	14.01	23.77	0.0586
20110101-20111231	10.0	-10.0	3.47	17.8	79.76	6.26(0.396)	4.38	0.68	8.93	2.96	795 X 764	-20.14	-39.34	55.74	0.0338
20120101-20121231	10.0	-9.99	2.9	14.93	81.61	5.32(0.336)	4.63	0.69	7.32	2.27	971 X 952	16.35	3.25	13.5	0.0306
20130101-20131231	10.0	-9.99	4.95	26.02	81.52	10.15(0.642)	1.27	0.74	12.77	5.74	1154 X 1094	46.25	19.03	5.75	0.0411
20140101-20141231	10.0	-10.0	5.12	26.11	82.2	9.18(0.581)	3.03	0.8	12.71	5.18	1103 X 1057	59.21	35.54	-7.02	0.0438
20150101-20151231	10.01	-9.98	8.16	41.93	76.29	6.81(0.431)	4.93	0.73	21.93	5.05	1083 X 953	108.46	46.78	-25.01	0.0493
20160101-20161231	10.0	-9.99	3.34	17.09	79.68	5.61(0.355)	3.57	0.72	8.58	2.6	1264 X 1186	1.13	-15.42	33.08	0.0321
20170101-20171231	10.0	-9.99	1.15	5.87	79.46	1.74(0.11)	5.27	0.6	2.96	0.47	1463 X 1421	-12.55	0.88	24.3	0.0158
20180101-20181231	9.99	-9.99	1.86	9.56	80.61	3.18(0.201)	3.82	0.56	4.74	1.09	1642 X 1606	-34.58	-38.75	53.71	0.017
20190101-20191231	10.0	-9.98	0.37	1.87	79.52	0.67(0.042)	6.57	0.49	0.94	0.1	1798 X 1755	15.46	26.71	-11.75	0.004
20200101-20200331	10.0	-9.96	-0.17	-3.51	77.66	-1.04(-0.066)	3.42	0.47	-1.85	-0.22	1885 X 1764	-20.45	-12.47	13.35	-0.0044
20100104-20200331	10.0	-9.99	37.77	18.98	80.04	5.37(0.34)	8.53	0.67	9.48	2.62	1211 X 1156	21.41	4.85	16.54	0.0317

Figure 15: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.7429	9.41	4.96	2.52	5.47	180	211930_h_ori32
0.7107	3.92	4.29	2.14	2.38	180	211919_my_244
0.6857	10.85	9.81	4.73	7.07	169	212322_ld2_14

Figure 16: 相关性结果

11 总结

alpha168表明成交量小的股票表现更好，而且从不同年限的对比可以明显看出风格的变化。（其实也是筛选大小盘股）alpha170是筛选小盘股+当日冲高回落+反转信号，其与alpha168有一定关系。