国泰君安191因子回测-21-30

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1 Alpha21

$$Alpha = REGBETA(MEAN(CLOSE, 6), SEQUENCE(6))$$

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	-2.36	-12.17	1.15	-1.85(-0.117)	25.66	0.38	-421.99	-6.01	524 X 1285	-1.32	14.01	-23.02	-0.0039
20110101-20111231	10.0	-10.0	-0.39	-1.99	0.71	-0.4(-0.025)	12.36	0.48	-112.66	-0.67	607 X 1533	-39.05	-39.34	35.07	-0.0008
20120101-20121231	10.0	-10.0	-0.43	-2.23	0.54	-0.47(-0.03)	16.64	0.45	-165.61	-0.96	631 X 1739	0.96	3.25	-5.42	-0.0013
20130101-20131231	10.0	-10.0	-1.31	-6.89	0.64	-1.19(-0.075)	17.16	0.45	-429.01	-3.88	630 X 1816	13.8	19.03	-27.58	-0.0022
20140101-20141231	9.99	-10.0	-0.37	-1.83	0.86	-0.29(-0.019)	15.91	0.47	-87.84	-0.43	847 X 1663	35.39	35.54	-39.17	-0.0011
20150101-20151231	10.0	-9.98	-1.88	-9.58	1.54	-0.84(-0.053)	57.77	0.47	-251.48	-2.09	902 X 1802	66.04	46.78	-85.51	-0.0013
20160101-20161231	10.0	-9.96	-1.57	-8.08	0.78	-1.44(-0.091)	31.58	0.39	-417.08	-4.64	898 X 1967	-31.77	-15.42	15.69	-0.0021
20170101-20171231	10.0	-9.97	-0.23	-1.18	0.74	-0.25(-0.016)	9.29	0.47	-64.15	-0.31	867 X 2382	-24.61	0.88	22.32	-0.0009
20180101-20181228	10.0	-10.0	-1.31	-6.76	0.81	-1.35(-0.085)	22.18	0.47	-332.84	-3.88	818 X 2694	-49.49	-38.75	35.99	-0.0015
20100104-20181228	10.0	-9.99	-9.86	-5.62	0.86	-0.87(-0.055)	104.41	0.45	-261.4	-2.22	748 X 1876	-3.35	2.87	-7.93	-0.0017

Figure 1: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.3304	3.36	4.53	4.7	1.08	92	214809_pv_model_2_gen6_191114_197
0.3224	4.57	8.65	5.36	1.81	103	214523_fac296
0.2989	2.62	2.86	nan	1.41	88	215063_qh53

Figure 2: 相关性结果

2 Alpha22

$$\begin{aligned} Alpha = & SMA(((CLOSE - MEAN(CLOSE, 6))/MEAN(CLOSE, 6) - \\ & DELAY((CLOSE - MEAN(CLOSE, 6))/MEAN(CLOSE, 6), 3)), 12, 1) \end{aligned} \tag{1}$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	9.99	-10.0	-0.86	-4.44	51.03	-0.7(-0.044)	17.21	0.48	-3.47	-0.21	904 X 900	3.37	14.01	-12.23	-0.0019
20110101-20111231	10.0	-9.99	-2.31	-11.8	51.05	-2.23(-0.141)	32.23	0.43	-9.26	-1.07	1068 X 1069	-52.89	-39.34	29.26	-0.0034
20120101-20121231	10.0	-10.0	-1.06	-5.45	52.11	-1.16(-0.074)	21.55	0.41	-4.18	-0.38	1164 X 1204	5.12	3.25	-16.02	-0.0021
20130101-20131231	9.98	-10.0	-1.72	-8.98	52.74	-1.65(-0.105)	19.79	0.42	-6.85	-0.68	1216 X 1231	13.0	19.03	-31.01	-0.0036
20140101-20141231	9.82	-10.0	-4.94	-25.52	54.14	-3.65(-0.231)	50.87	0.41	-18.78	-2.5	1205 X 1304	-3.57	35.54	-46.85	-0.0054
20150101-20151231	9.94	-9.99	1.12	5.92	47.67	0.47(0.03)	22.67	0.48	4.82	0.17	1322 X 1381	79.94	46.78	-68.14	0.001
20160101-20161231	9.9	-10.0	-2.86	-14.68	50.7	-2.17(-0.137)	32.62	0.43	-11.62	-1.17	1407 X 1458	-48.46	-15.42	18.67	-0.003
20170101-20171231	9.93	-10.01	1.66	8.6	49.49	1.37(0.087)	8.3	0.51	6.88	0.57	1642 X 1605	-24.8	0.88	41.58	0.0021
20180101-20181228	9.98	-9.96	-2.18	-11.22	47.53	-2.11(-0.134)	26.5	0.43	-9.46	-1.03	1750 X 1762	-56.98	-38.75	34.61	-0.0032
20100104-20181228	9.95	-9.99	-13.14	-7.51	50.71	-1.07(-0.067)	139.49	0.45	-5.94	-0.41	1298 X 1324	-9.54	2.87	-5.54	-0.0022

Figure 3: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.2085	12.32	10.0	2.67	11.34	128	213654_h7288
0.2039	2.4	1.92	0.29	1.19	81	215415_fac85
0.2001	2.34	3.89	3.49	2.22	28	216578_yf2

Figure 4: 相关性结果

3 Alpha23

$$Alpha = SMA((CLOSE > DELAY(CLOSE,1)?STD(CLOSE:20),0),20,1)/(SMA((CLOSE > DELAY(CLOSE,1)? STD(CLOSE,20):0),20,1) + SMA((CLOSE <= DELAY(CLOSE,1)?STD(CLOSE,20):0),20,1)) * 100 \quad (2)$$

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	-2.36	-12.18	32.39	-3.2(-0.203)	25.8	0.44	-15.05	-1.96	921 X 867	-0.8	14.01	-23.57	-0.0156
20110101-20111231	10.0	-10.0	-1.75	-8.96	31.63	-3.15(-0.199)	20.24	0.44	-11.33	-1.68	1095 X 1028	-42.91	-39.34	24.97	-0.0113
20120101-20121231	9.99	-10.0	-1.89	-9.74	31.84	-4.3(-0.272)	19.26	0.38	-12.23	-2.38	1206 X 1154	-5.11	3.25	-14.36	-0.0149
20130101-20131231	9.97	-10.03	-1.75	-9.2	32.63	-2.21(-0.14)	19.5	0.48	-11.27	-1.18	1292 X 1153	16.79	19.03	-35.04	-0.0091
20140101-20141231	9.92	-10.06	-2.44	-12.46	29.35	-2.99(-0.189)	28.05	0.47	-16.99	-1.95	1387 X 1118	29.05	35.54	-53.41	-0.0115
20150101-20151231	9.84	-10.12	-5.46	-27.94	22.33	-1.73(-0.109)	82.42	0.5	-50.23	-1.93	1615 X 1080	45.73	46.78	-99.73	-0.0051
20160101-20161231	9.96	-10.01	-2.41	-12.42	27.84	-1.76(-0.111)	24.85	0.49	-17.8	-1.17	1591 X 1269	-21.69	-15.42	-3.14	-0.007
20170101-20171231	9.98	-10.0	-0.53	-2.72	28.0	-0.87(-0.055)	7.19	0.51	-3.89	-0.27	1771 X 1458	-22.49	0.88	17.02	-0.0003
20180101-20181228	9.99	-9.98	1.17	6.02	27.22	1.39(0.088)	5.87	0.55	8.85	0.66	1945 X 1562	-42.9	-38.75	55.03	0.0128
20100104-20181228	9.96	-10.02	-17.43	-9.96	29.24	-1.48(-0.094)	192.74	0.47	-13.64	-0.87	1426 X 1188	-5.07	2.87	-14.84	-0.0069

Figure 5: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.6862	3.02	3.65	9.19	1.9	28	216639_yf4
0.6538	11.05	11.52	4.81	10.12	128	213652_h13515
0.6518	3.92	7.88	4.84	1.35	91	214927_pv_model_8_gen4_191114_135

Figure 6: 相关性结果

4 Alpha24

$$Alpha = SMA(CLOSE - DELAY(CLOSE,5),5,1) \quad (3)$$

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	-2.36	-12.18	32.39	-3.2(-0.203)	25.8	0.44	-15.05	-1.96	921 X 867	-0.8	14.01	-23.57	-0.0156
20110101-20111231	10.0	-10.0	-1.75	-8.96	31.63	-3.15(-0.199)	20.24	0.44	-11.33	-1.68	1095 X 1028	-42.91	-39.34	24.97	-0.0113
20120101-20121231	9.99	-10.0	-1.89	-9.74	31.84	-4.3(-0.272)	19.26	0.38	-12.23	-2.38	1206 X 1154	-5.11	3.25	-14.36	-0.0149
20130101-20131231	9.97	-10.03	-1.75	-9.2	32.63	-2.21(-0.14)	19.5	0.48	-11.27	-1.18	1292 X 1153	16.79	19.03	-35.04	-0.0091
20140101-20141231	9.92	-10.06	-2.44	-12.46	29.35	-2.99(-0.189)	28.05	0.47	-16.99	-1.95	1387 X 1118	29.05	35.54	-53.41	-0.0115
20150101-20151231	9.84	-10.12	-5.46	-27.94	22.33	-1.73(-0.109)	82.42	0.5	-50.23	-1.93	1615 X 1080	45.73	46.78	-99.73	-0.0051
20160101-20161231	9.96	-10.01	-2.41	-12.42	27.84	-1.76(-0.111)	24.85	0.49	-17.8	-1.17	1591 X 1269	-21.69	-15.42	-3.14	-0.007
20170101-20171231	9.98	-10.0	-0.53	-2.72	28.0	-0.87(-0.055)	7.19	0.51	-3.89	-0.27	1771 X 1458	-22.49	0.88	17.02	-0.0003
20180101-20181228	9.99	-9.98	1.17	6.02	27.22	1.39(0.088)	5.87	0.55	8.85	0.66	1945 X 1562	-42.9	-38.75	55.03	0.0128
20100104-20181228	9.96	-10.02	-17.43	-9.96	29.24	-1.48(-0.094)	192.74	0.47	-13.64	-0.87	1426 X 1188	-5.07	2.87	-14.84	-0.0069

Figure 7: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.6862	3.02	3.65	9.19	1.9	28	216639_yf4
0.6538	11.05	11.52	4.81	10.12	128	213652_h13515
0.6518	3.92	7.88	4.84	1.35	91	214927_pv_model_8_gen4_191114_135

Figure 8: 相关性结果

5 Alpha25

$$Alpha = ((-1 * RANK((DELTA(CLOSE, 7) * (1 - RANK(DECAYLINEAR((VOLUME/MEAN(VOLUME, 20)), 9))))))* (1 + RANK(SUM(RET, 250)))) \tag{4}$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	9.75	-9.75	4.42	22.84	48.57	5.79(0.366)	3.68	0.69	19.29	3.97	809 X 701	35.73	12.65	11.1	0.041
20110101-20111231	10.0	-10.0	3.57	18.31	46.69	5.42(0.343)	2.56	0.67	15.68	3.4	973 X 826	-20.11	-39.34	56.73	0.0359
20120101-20121231	10.0	-9.99	3.45	17.75	46.81	5.5(0.348)	3.95	0.67	15.16	3.39	1156 X 980	19.75	3.25	15.73	0.0373
20130101-20131231	10.0	-9.98	3.81	20.01	48.86	6.1(0.386)	3.31	0.66	16.38	3.9	1291 X 1074	44.23	19.03	-4.25	0.0328
20140101-20141231	10.01	-9.97	4.62	23.58	48.95	7.59(0.48)	2.92	0.71	19.26	5.27	1316 X 1128	55.19	35.54	-8.17	0.0377
20150101-20151231	10.04	-9.95	7.01	36.2	47.09	3.1(0.196)	24.26	0.62	30.53	2.72	1350 X 1160	107.65	46.78	-36.45	0.039
20160101-20161231	10.0	-9.99	3.85	19.73	49.0	4.74(0.3)	5.38	0.68	16.12	3.01	1462 X 1243	4.29	-15.42	35.22	0.0342
20170101-20171231	10.0	-9.99	1.05	5.37	47.2	1.5(0.095)	5.38	0.57	4.56	0.51	1549 X 1317	-10.78	0.88	21.55	0.016
20180101-20181228	9.99	-10.01	2.35	12.1	47.94	3.1(0.196)	6.12	0.63	10.1	1.56	1772 X 1474	-31.16	-38.75	55.3	0.0245
20100104-20181228	9.98	-9.96	34.14	19.55	47.9	3.77(0.238)	24.42	0.65	16.35	2.41	1298 X 1101	22.74	2.72	16.39	0.0331

Figure 9: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.7456	4.78	7.85	6.48	3.7	91	214870_pv_model_6_mod_gen4_191114_138
0.7248	2.98	6.88	1.73	1.45	96	214791_pv_model_1_191114_8
0.6984	2.8	5.97	8.32	1.14	105	214403_pv_model_1_2_191101_82

Figure 10: 相关性结果

6 Alpha26

$$Alpha = ((((SUM(CLOSE, 7)/7) - CLOSE)) + ((CORR(VWAP, DELAY(CLOSE, 5), 230)))) \tag{5}$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	7.23	-7.23	1.48	27.73	53.79	1.36(0.086)	13.9	0.38	7.86	0.97	555 X 556	29.93	24.89	-8.8	0.0009
20110101-20111231	2.46	-2.46	0.81	346.16	50.68	1.25(0.079)	12.11	0.15	13.27	3.26	217 X 199	29.3	4.16	4.32	0.0051
20120101-20121231	0.0	0.0	0.0	0.0	nan	nan(nan)	nan	0.0	nan	nan	0 X 0	nan	0.0	nan	0.0
20130101-20131231	0.0	0.0	0.0	0.0	nan	nan(nan)	nan	0.0	nan	nan	0 X 0	nan	0.0	nan	0.0
20140101-20141231	0.0	0.0	0.0	0.0	nan	nan(nan)	nan	0.0	nan	nan	0 X 0	nan	0.0	nan	0.0
20150101-20151231	7.94	-7.91	-1.26	964.26	58.99	0.96(0.061)	58.55	0.41	-5.53	3.87	1119 X 881	62.32	27.36	-78.89	-0.0005
20160101-20161231	8.4	-8.36	2.4	222.55	70.89	1.38(0.088)	12.16	0.48	8.27	2.45	1193 X 1085	-36.1	-19.68	65.62	0.0017
20170101-20171231	1.06	-1.07	-0.19	-4378.05	69.62	-0.97(-0.061)	39.07	0.07	-5.31	-7.71	166 X 131	-25.08	0.82	6.59	-0.0002
20180101-20181228	0.21	-0.21	-0.1	-0.51	98.29	-0.9(-0.057)	71.96	0.01	-10.02	-0.06	1 X 0	-183.38	-6.36	134.14	-0.0007
20100104-20181228	3.04	-3.03	3.13	-314.41	61.24	-0.2(-0.013)	152.98	0.17	3.85	-0.46	362 X 318	15.21	3.46	-3.44	0.0007

Figure 11: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.3002	2.5	6.32	3.28	1.26	91	214874_pv_model_7_mod_gen2_191114_233
0.2842	4.2	5.16	3.79	3.12	87	215126_qh5
0.2833	10.73	10.78	6.39	8.39	130	213539 h6372

Figure 12: 相关性结果

7 Alpha27

$$Alpha = WMA((CLOSE - DELAY(CLOSE,3))/DELAY(CLOSE,3) * 100 + (CLOSE - DELAY(CLOSE,6))/DELAY(CLOSE,6) * 100, 12) \tag{6}$$

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	-3.04	-15.71	18.19	-2.62(-0.165)	34.11	0.43	-34.55	-2.43	777 X 1030	-4.73	14.01	-26.67	-0.0232
20110101-20111231	10.0	-10.0	-2.41	-12.35	17.43	-2.45(-0.155)	29.14	0.44	-28.34	-2.06	940 X 1199	-49.66	-39.34	24.95	-0.0227
20120101-20121231	9.99	-10.0	-4.35	-22.41	17.55	-4.71(-0.298)	44.75	0.36	-51.06	-5.32	1051 X 1319	-22.92	3.25	-21.89	-0.0403
20130101-20131231	9.97	-10.01	-3.71	-19.48	17.12	-3.32(-0.21)	37.9	0.45	-45.55	-3.54	987 X 1460	3.9	19.03	-42.81	-0.0251
20140101-20141231	9.78	-10.02	-2.39	-12.26	17.11	-2.23(-0.141)	37.02	0.42	-28.79	-1.89	1009 X 1501	26.7	35.54	-50.42	-0.0146
20150101-20151231	9.4	-10.04	-9.87	-52.32	17.4	-4.12(-0.26)	105.36	0.4	-119.65	-7.14	1096 X 1608	18.84	46.78	-118.44	-0.0406
20160101-20161231	8.62	-10.0	-6.24	-33.65	17.1	-4.58(-0.29)	81.51	0.35	-80.28	-6.43	1028 X 1837	-62.4	-15.42	-10.11	-0.0395
20170101-20171231	8.86	-10.0	-3.18	-16.72	17.29	-2.24(-0.142)	43.46	0.41	-39.93	-2.2	1203 X 2045	-54.34	0.88	15.6	-0.0187
20180101-20181228	9.78	-9.98	-4.75	-24.54	17.53	-4.45(-0.282)	50.04	0.37	-56.42	-5.27	1593 X 1919	-82.51	-38.75	31.89	-0.0334
20100104-20181228	9.6	-10.01	-39.94	-23.28	17.42	-3.27(-0.207)	418.52	0.4	-53.49	-3.78	1076 X 1547	-24.61	2.87	-22.03	-0.0287

Figure 13: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.4453	3.86	6.04	1.49	1.99	91	214854_pv_model_5_mod_gen2_191114_161
0.4427	2.35	6.97	0.32	1.14	95	214820_pv_model_3_gen6_191114_166
0.4166	3.96	9.32	3.67	1.98	91	214854_pv_model_5_mod_gen2_191114_197

Figure 14: 相关性结果

8 Alpha28

$$Alpha = 3 * SMA((CLOSE - TSMIN(LOW,9))/(TSMAX(HIGH,9) - TSMIN(LOW,9)) * 100, 3, 1) - 2 * SMA(SMA((CLOSE - TSMIN(LOW,9))/(MAX(HIGH,9) - TSMAX(LOW,9)) * 100, 3, 1), 3, 1) \tag{7}$$

dates	long(M)	short(M)	pnl(M)	%ret	%tvr	shrp (IR)	%dd	%win	bpmrgn	fitness	Coverage	%posret	%inxret	%negret	IC
20100104-20101231	10.0	-10.0	-0.78	-4.01	18.79	-0.57(-0.036)	20.22	0.55	-8.54	-0.27	827 X 977	13.01	14.01	-21.03	-0.0005
20110101-20111231	10.0	-10.0	1.77	9.09	18.82	1.62(0.102)	9.86	0.51	19.32	1.12	988 X 1149	-38.98	-39.34	57.16	0.0018
20120101-20121231	10.0	-10.0	-0.62	-3.18	19.85	-1.15(-0.072)	8.72	0.46	-6.41	-0.46	1160 X 1208	-1.97	3.25	-4.39	-0.0048
20130101-20131231	10.0	-10.0	-0.35	-1.85	11.44	-0.27(-0.017)	19.16	0.47	-6.48	-0.11	779 X 1668	20.03	19.03	-23.74	-0.0037
20140101-20141231	10.0	-10.0	-4.27	-21.85	10.84	-1.38(-0.087)	65.47	0.53	-80.32	-1.96	1184 X 1325	33.6	35.54	-77.14	-0.0015
20150101-20151231	10.0	-10.0	10.25	52.51	8.78	2.3(0.145)	50.31	0.61	239.13	5.62	1313 X 1389	63.33	46.78	41.67	0.0037
20160101-20161231	10.0	-10.0	2.93	15.01	11.27	1.14(0.072)	22.29	0.51	53.22	1.32	1369 X 1495	12.09	-15.42	17.9	0.001
20170101-20171231	10.0	-10.0	-3.04	-15.6	12.66	-1.28(-0.081)	43.46	0.54	-49.18	-1.42	1427 X 1819	-25.1	0.88	-6.02	-0.0014
20180101-20181228	10.0	-10.0	-0.37	-1.9	17.17	-0.23(-0.014)	16.45	0.45	-4.43	-0.08	1705 X 1806	-41.69	-38.75	37.89	-0.0011
20100104-20181228	10.0	-10.0	5.53	3.15	14.4	0.26(0.016)	73.83	0.51	8.78	0.12	1196 X 1426	3.8	2.87	2.53	-0.0007

Figure 15: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.2263	4.76	5.82	2.27	2.71	101	214631_fac65
0.2197	2.63	6.63	1.97	1.71	105	214451_pv_model_4_2_mod_191101_60
0.1987	2.12	7.95	3.46	1.16	95	214820_pv_model_3_gen6_191114_36

Figure 16: 相关性结果

9 Alpha29

$$Alpha = (CLOSE - DELAY(CLOSE, 6))/DELAY(CLOSE, 6) * VOLUME \tag{8}$$

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	-4.53	-23.37	72.81	-3.5(-0.221)	47.78	0.35	-12.84	-1.98	689 X 1063	-26.97	14.01	-19.79	-0.0193
20110101-20111231	10.0	-10.0	-2.17	-11.09	72.13	-1.99(-0.126)	28.13	0.42	-6.17	-0.78	876 X 1192	-48.61	-39.34	26.37	-0.0086
20120101-20121231	10.0	-10.0	-5.06	-25.89	71.6	-4.31(-0.272)	53.08	0.4	-14.54	-2.59	879 X 1427	-35.4	3.25	-16.67	-0.0196
20130101-20131231	9.99	-10.0	-4.91	-25.84	68.83	-3.18(-0.201)	49.11	0.37	-14.99	-1.95	826 X 1529	-15.29	19.03	-36.28	-0.019
20140101-20141231	9.98	-9.99	0.07	0.37	67.12	0.04(0.003)	27.38	0.48	0.21	0.0	763 X 1546	61.21	35.54	-60.46	-0.0047
20150101-20151231	9.98	-9.94	-5.0	-25.79	66.98	-2.52(-0.16)	69.77	0.41	-15.35	-1.57	884 X 1421	4.7	46.78	-56.24	-0.0107
20160101-20161231	9.97	-9.98	-5.39	-27.71	69.31	-3.85(-0.244)	59.93	0.37	-15.98	-2.44	914 X 1697	-66.11	-15.42	10.7	-0.0165
20170101-20171231	9.97	-9.99	-4.02	-20.69	69.32	-1.91(-0.121)	58.06	0.38	-11.92	-1.04	1061 X 1964	-54.63	0.88	13.26	-0.0145
20180101-20181228	9.97	-9.98	-9.02	-46.52	71.31	-5.91(-0.374)	92.33	0.35	-26.08	-4.77	1398 X 1953	-126.12	-38.75	32.99	-0.0265
20100104-20181228	9.98	-9.99	-40.03	-22.92	69.93	-2.8(-0.177)	402.69	0.39	-13.1	-1.6	921 X 1533	-34.09	2.87	-11.74	-0.0155

Figure 17: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.361	2.35	6.97	0.32	1.14	95	214820_pv_model_3_gen6_191114_166
0.3512	4.76	7.91	3.4	2.43	96	214808_pv_model_1_mod_gen2_191114_95
0.334	3.85	4.39	2.57	1.06	103	214551_fac128

Figure 18: 相关性结果

10 Alpha30

$$Alpha = WMA((REGRESI(CLOSE/DELAY(CLOSE) - 1, MKT, SMB, HML60))^2, 20) \tag{9}$$

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	-1.61	-8.3	3.1	-1.54(-0.098)	20.37	0.45	-107.02	-2.52	727 X 1003	-7.42	14.01	-9.19	-0.0006
20110101-20111231	10.0	-10.0	-1.27	-6.49	2.38	-1.14(-0.072)	18.02	0.46	-109.1	-1.88	831 X 1239	-38.31	-39.34	25.32	0.0004
20120101-20121231	10.0	-10.0	-0.66	-3.41	2.25	-0.79(-0.05)	16.11	0.51	-60.68	-0.98	933 X 1394	0.97	3.25	-7.79	-0.0002
20130101-20131231	10.0	-10.0	-1.0	-5.28	2.18	-1.06(-0.067)	15.28	0.49	-96.96	-1.66	984 X 1460	18.17	19.03	-28.72	-0.0019
20140101-20141231	10.0	-10.0	-2.56	-13.05	2.46	-2.68(-0.169)	32.4	0.46	-212.15	-6.16	983 X 1505	26.4	35.54	-52.49	-0.0107
20150101-20151231	10.0	-10.0	-0.87	-4.44	3.06	-0.38(-0.024)	36.41	0.5	-58.1	-0.46	1211 X 1448	66.89	46.78	-75.71	0.0125
20160101-20161231	10.0	-10.0	-2.17	-11.12	2.65	-1.16(-0.073)	35.98	0.43	-167.58	-2.38	1149 X 1679	-24.31	-15.42	2.11	-0.0108
20170101-20171231	10.0	-10.0	-2.5	-12.83	3.29	-2.22(-0.14)	28.79	0.52	-155.72	-4.38	1108 X 2043	-36.83	0.88	11.17	-0.0098
20180101-20181228	10.0	-10.0	-0.89	-4.57	2.48	-0.81(-0.052)	13.0	0.5	-73.74	-1.11	1287 X 2194	-46.29	-38.75	37.13	-0.0004
20100104-20181228	10.0	-10.0	-13.52	-7.73	2.65	-1.13(-0.072)	136.44	0.48	-116.65	-1.93	1024 X 1552	-4.55	2.87	-10.91	-0.0024

Figure 19: 回测结果

Corr	ISSharpe	SemiOS	OSSharpe	Fitness	OSdays	ID
0.6111	2.89	2.62	2.6	2.69	170	211938_my_T53
0.6076	3.02	5.7	4.24	1.15	95	214837_pv_model_4_mod_gen4_191114_199
0.5982	3.97	6.74	6.94	1.76	96	214808_pv_model_1_mod_gen2_191114_155

Figure 20: 相关性结果

11 总结

部分因子包含了一些移动平均的计算，这里同意采用pandas的ewma指数加权移动平均来代替因子公式中的移动平均（出于实现的方便和计算速度的考虑）。另外，这一批因子的预测能力普遍较低，仅alpha25 的IC 值较高，但也不如1-20 个因子中较好的因子。

不过比较有趣的是alpha21和alpha30使用了回归计算后的一些指标作为因子。只是效果一般。